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INFLUENZA AND PNEUMONIA MORTALITY IN A GROUP OF 90 CITIES IN THE UNITED STATES, AUGUST 1935–MARCH 1943, WITH A SUMMARY FOR AUGUST 1920–MARCH 1943¹

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Weekly mortality from influenza and pneumonia is probably the best available measure of the occurrence and extent of influenza epidemics. Two other indices of influenza epidemics are readily available, namely, deaths from all causes and reported cases of influenza. Influenza epidemics in the past have been of such magnitude and have occurred in such close sequence in different geographic sections that they are easily discernible in weekly mortality rates from all causes (1). On the other hand, the number of reported cases of influenza is markedly deficient and at the time of an epidemic the increase in reported cases frequently lags behind the increase in deaths from influenza and pneumonia. Current reports of influenza cases for consecutive weeks, however, show the occurrence of influenza epidemics and the areas of the country affected by the epidemic.

During the fall and winter months of 1942 cases of influenza reported by attending physicians to local health departments and assembled by the State health departments and the United States Public Health Service (15) showed an incidence somewhat in excess of the median for the same weeks as based on the 5 previous years. From September to November, inclusive, reported cases of influenza were only slightly in excess of the number reported for the same months of 1941 but they were 15 to 60 percent above the 5-year median as computed for corresponding monthly intervals. From December 1942 through March 1943 the number of reported cases has not varied significantly from the 5-year median for corresponding months.

Sickness absenteeism among industrial workers as reported by sick benefit associations to the Public Health Service (4) shows an excess

¹ From the Division of Public Health Methods, National Institute of Health.

in the third and fourth quarters of 1942 over the same period of 1941 of 18 and 44 percent, respectively, in the rates for all respiratory diseases; the excess for pneumonia was 50 and 138 percent, for influenza and grippe 40 and 54 percent, and for bronchitis 12 and 27 percent in the third and fourth quarters, respectively.

Weekly mortality from all causes in cities of 100,000 or more population as issued by the Bureau of the Census (13) showed a marked excess throughout the last quarter of 1942 and the first quarter of 1943 over the 3-year average for corresponding weeks of 1939-41 and 1940-42. As far back as the first of June, mortality from all causes was somewhat above the level of this 3-year average. However, mortality in these large cities has not shown definite peaks that could be interpreted as epidemics. Nor does an examination of the rates for individual cities reveal a weekly excess that could be considered as a local influenza outbreak in any of the cities. Quarterly rates of mortality (annual basis) from all causes in these cities for the quarters of 1942-43 as compared with the same quarters of the 2 preceding years are as follows:

Year	3d quarter July- September	4th quarter October- December	1st quarter January- March	2d quarter April-June
	Annual rate per 1,000 ¹			
1940-41.....	10.6	11.4	13.1	11.4
1941-42.....	10.3	11.3	12.5	11.1
1942-43.....	10.4	12.1	13.6	-----

¹ The rates for 1940 are based on the enumerated population (April 1, 1940); those for 1942 and 1943 are based on an estimate of the civilian population of metropolitan areas made by the Bureau of the Census from sugar registration figures (May 1, 1942); those for 1941 are an average of the populations for 1940 and 1942. The Bureau of the Census release states that the sugar registration data are probably the most reliable indicator of population changes which have taken place by reason of the withdrawal of men to the armed forces and the migration of population to cities engaged in war activities. Deaths are taken from the Weekly Mortality Index (13).

The table shows that in the third quarter (July-September) the rate for 1942 was substantially the same as that for 1941 although a slight decline might have been expected on the basis of pneumonia trends since 1937 (6); in the fourth quarter (October-December) the rate for 1941 was also practically the same as for 1940, but for 1942 it was 7 percent higher than for 1941; in the first quarter the rate for 1942 was 5 percent lower than for 1941, and for 1943 it was 9 percent higher than for 1942.

Mortality rates for whole States probably involve less error due to migration of population than do rates for cities. The following table based on preliminary reports from health departments of 35 States and the District of Columbia contains mortality rates during

the third and fourth quarters of 1940, 1941, and 1942 for all causes and for selected specific causes:

Quarter year	All causes	Tuberculosis (all forms)	Influenza	Pneumonia	Cancer	Diabetes	Cerebral hemorrhage	Heart disease	Nephritis	Auto accidents	All other accidents
	Annual rate per 100,000 ¹										
Third quarter:											
1940.....	962	42.5	3.2	28.0	118.7	23.2	80.8	252.8	68.6	25.7	49.2
1941.....	956	41.0	2.7	26.0	120.5	22.1	78.1	253.2	64.7	30.7	49.4
1942.....	961	39.9	2.4	27.1	123.3	22.7	81.4	261.8	64.0	19.4	49.9
Fourth quarter:											
1940.....	1,042	41.4	10.7	53.0	119.4	26.5	87.9	290.5	74.9	31.3	42.7
1941.....	1,023	40.2	7.0	42.5	122.0	24.6	87.7	290.7	71.6	34.3	42.8
1942.....	1,102	41.1	8.2	50.5	127.2	27.3	99.4	327.7	75.2	19.6	51.4

¹ Rates are based on preliminary reports from health officers and published by the Public Health Service as an annual report of current morbidity and mortality (14).

The rates for 1940 are based on the enumerated population (Apr. 1, 1940); those for 1942 are based on an estimate of the civilian population of States made by the Bureau of the Census from sugar registration figures (May 1, 1942); those for 1941 are an average of the populations for 1940 and 1942.

The rates for all causes show the same relationships in States as in cities; namely, the third quarter of 1942 had a slightly higher rate of mortality than the same quarter of 1941, while the fourth quarter of 1942 had a rate which was 8 percent higher than the same quarter of 1941. For the fourth quarter all of the specific causes included in the table except automobile accidents were higher in 1942 than 1941; all accidents exclusive of automobile accidents were 20 percent higher, influenza and pneumonia 19 percent, cerebral hemorrhage and heart disease 13 percent, diabetes 11 percent, nephritis 5 percent, cancer 4 percent, and tuberculosis 2 percent higher in 1942 than in 1941.

Mortality data from all causes in 45 States and the District of Columbia are available in preliminary reports issued by the Bureau of the Census (12). Rates by geographic section for the third and fourth quarters of 1940, 1941, and 1942 and the first quarter of 1941, 1942, and 1943 are as follows:

Quarter year	45 States and D. C.	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
	Annual rate per 1,000 ¹									
Third quarter:										
1940.....	9.9	10.5	10.1	10.1	9.5	9.6	9.7	9.2	9.9	10.7
1941.....	9.9	10.2	10.1	10.2	9.8	9.8	9.5	8.9	9.9	10.7
1942.....	9.7	10.5	10.1	9.7	9.5	9.3	8.7	8.4	9.7	10.9
Fourth quarter:										
1940.....	9.9	11.5	10.3	10.0	9.4	9.6	9.1	8.5	10.0	11.2
1941.....	9.9	11.1	10.1	10.0	9.5	9.5	9.1	8.6	9.8	11.1
1942.....	10.2	12.1	11.4	10.1	9.8	9.3	8.7	8.7	10.2	11.4
First quarter: ²										
1941.....	12.0	13.9	12.4	11.8	11.5	12.4	12.3	10.9	10.7	12.2
1942.....	11.5	12.2	12.0	11.9	11.2	10.9	10.8	10.1	11.3	12.5
1943.....	11.9	15.1	13.2	11.7	11.8	11.0	10.4	10.1	11.7	13.7

¹ The rates are computed from deaths from all causes as released by the Bureau of the Census (14); the population for 1940 is the enumerated population (Apr. 1, 1940); for 1942 an estimate of the civilian population of States made by the Bureau of the Census from sugar registration figures (May 1, 1942); and for 1941 an average between the populations for 1940 and 1942.

² Rates for the first quarter are based on 41 States and the District of Columbia.

Mortality from all causes for 45 States shows a small excess (3 percent) in the fourth quarter of 1942 and in the first quarter of 1943 compared with the same quarters of 1941 and 1942, respectively; for States the excess is largely confined to the New England and Middle Atlantic sections, although there is a slight excess in the West North Central, Mountain, and Pacific sections also.

WEEKLY INFLUENZA AND PNEUMONIA MORTALITY IN A GROUP OF
ABOUT 90 CITIES, AUGUST 1920 TO MARCH 1943

Weekly influenza and pneumonia mortality in a group of cities of the United States from 1920 to 1935 was summarized in previous papers (2, 3). The present paper brings this summary up to date with special reference to the trend of pneumonia mortality. The data are weekly records of deaths from influenza and pneumonia in groups of cities in nine geographic sections of the United States.² Although outbreaks of influenza are clearly visible in weekly rates of mortality from influenza and pneumonia, as shown in the continuous line in figure 1, some measure of excess deviation from normal seasonal or expected rates is useful in an examination of influenza epidemics. The details of the methods used to derive the normal seasonal expectancy, shown as a dotted line in figure 1, are outlined in the appendix. It should be noted, however, that changes in the annual levels of the rates from 1930 to 1935 made it necessary to adjust the norm to changing annual levels; and with the much sharper decline since 1937 with what amounted to a somewhat changing seasonal curve, it seemed necessary to fit the norm to quarterly levels, exclusive of definite epidemic weeks. Prior to 1930 the seasonal norm was an unchanging level based on medians of corresponding weeks of the 7 years 1921-27. Therefore, prior to 1930, figure 1 indicates periods when the rates were generally below (1920-21) or generally above (1925-26) the median rates, even when there was no definite epidemic. Since 1930, however, the figure indicates only epidemic deviations from the norm and does not indicate years, quarters, or other extended periods when respiratory disease mortality was generally below or above expectancy but was not epidemic. These facts should be remembered in connection with deviations from the normal seasonal expectancy as shown in figure 6.

Figure 1 shows the course of weekly mortality from influenza and pneumonia in the whole group of cities from August 1920 to March 1943. Although the general level of influenza and pneumonia mortal-

² Weekly reports of deaths are made to the Division of Sanitary Reports and Statistics of the U. S. Public Health Service from city health departments selected to give representation to each geographic section of the United States. Among the cities originally reporting whose records were used in previous papers (approximately 95 cities), 90 were selected in January 1941 which sent regular reports. The 90 cities used in the present report, 1935-43, have an aggregate population of 34,000,000; they are listed by geographic section in the appendix.

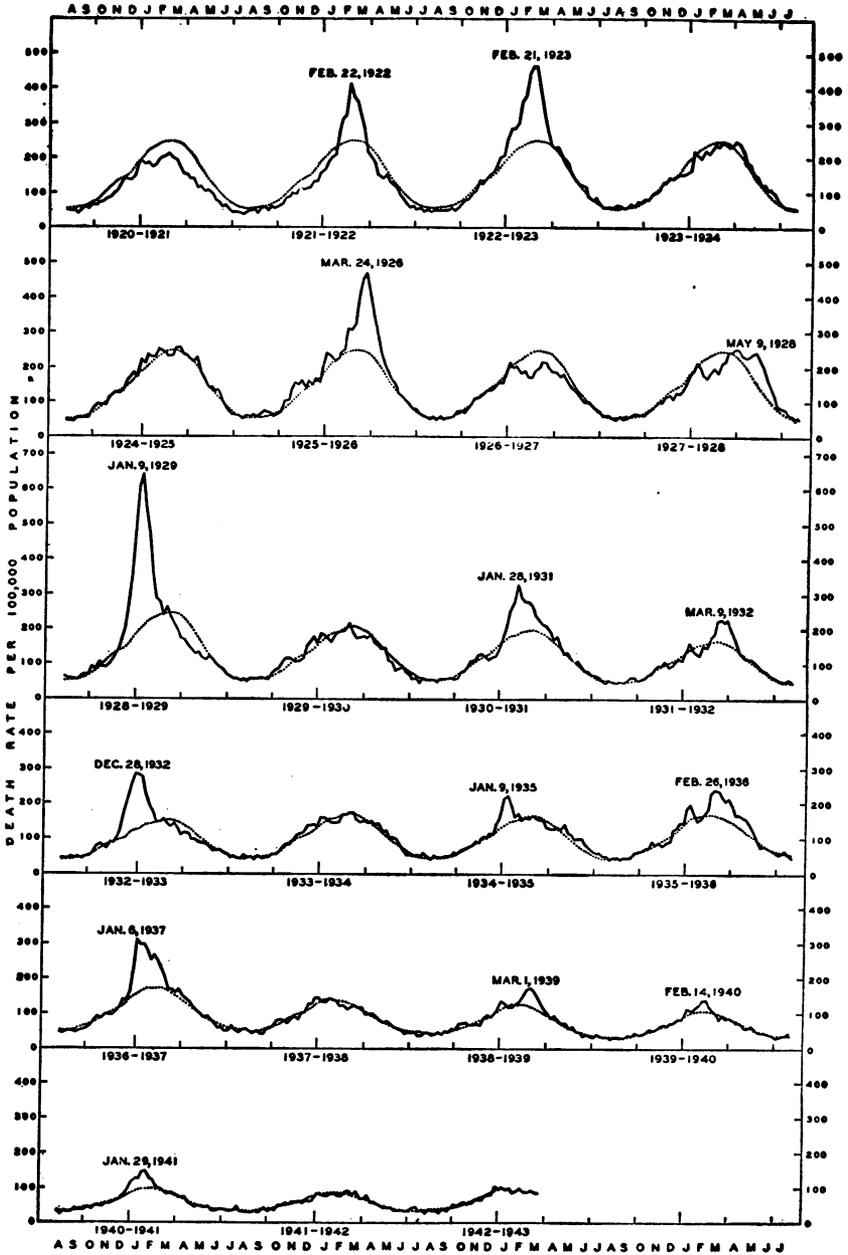


FIGURE 1.—Weekly mortality (annual basis) from influenza and pneumonia in a group of about 90 cities in the United States, August 1920–March 1943. Dates are middle (Wednesday) of peak weeks. The dotted line is the seasonal norm from which epidemic excess mortality was obtained. (See appendix for method of computation.)

ity has varied from year to year the downward trend of the rates is not marked (fig. 1) until the winter of 1937-38. Since then, however, pneumonia seasonal levels have definitely declined, as may be seen by a comparison of the actual rates for the winter of 1941-42 with those for 1937-38. Influenza epidemics of various sizes occurred in all but 9 out of the 23 years shown in figure 1. The three epidemics since the winter of 1937-38 were of minor intensity; the total excess mortality rates in two of the winters, 1938-39 and 1940-41, are about equal to those of the winter of 1934-35; while the total excess for the epidemic of the winter of 1939-40 was the smallest that has occurred in the last 23 years (table 1). No epidemic excess is seen in the weekly rates for the year 1942-43 (fig. 1).

TABLE 1.—Total excess¹ death rate (actual basis) per 100,000 from influenza and pneumonia during the whole of each epidemic in cities of nine geographic sections of the United States, August 1920-March 1943

Epidemic of	All-cities	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
1921-22	18.3	29.5	24.7	11.4	34.8	9.4	16.0	14.6	36.2	36.3
1922-23	29.9	36.6	26.5	32.2	53.3	42.7	44.0	6.7	17.6	11.3
1925-26	25.3	30.0	41.2	22.2	None	26.2	38.2	58.8	16.8	9.3
1927-28	11.6	15.4	20.9	17.9	4.9	None	11.9	13.7	7.7	None
1928-29	44.4	42.3	43.0	43.7	42.8	47.6	92.0	68.2	68.7	43.0
1930-31	16.4	13.8	24.3	9.7	14.0	27.2	None	17.7	None	None
1931-32	7.4	None	13.5	4.6	19.4	8.0	8.6	7.2	24.1	None
1932-33	19.2	22.8	18.1	13.8	42.7	22.1	33.9	41.1	34.7	16.7
1934-35	5.4	8.1	5.3	6.3	11.1	14.5	28.3	10.7	13.4	None
1935-36	12.5	16.9	7.1	5.7	24.0	10.7	61.1	28.9	None	4.5
1936-37	18.4	25.3	11.4	16.1	27.0	17.7	41.2	24.5	68.0	31.0
1938-39	5.2	5.2	2.9	11.8	9.2	None	8.7	None	None	None
1939-40	1.9	None	None	None	6.2	5.8	6.5	13.5	None	None
1940-41	5.4	12.4	4.1	1.9	7.2	5.6	15.2	13.2	15.6	8.7

¹ See appendix for the method of computing death rates in excess of a normal or expected rate.

² Each yearly interval begins with the 32d calendar week and ends with the 31st calendar week (early August) of the year following.

TABLE 2.—Mortality from influenza and pneumonia in the U. S. Registration States, 1900-1941, and for a total of about 90 cities, 1920-1942

Year	Rate ¹ in registration States	Year	Rate ¹ in registration States	Year	Rate ¹ in—		Year	Rate ¹ in—	
					Registration States	Cities		Registration States	Cities
1900	202.2	1910	155.9	1920	207.3	232.8	1930	102.5	119.2
1901	197.2	1911	145.4	1921	98.7	110.8	1931	107.5	128.9
1902	161.3	1912	138.4	1922	132.3	146.1	1932	107.3	115.9
1903	169.3	1913	140.8	1923	151.7	170.7	1933	95.7	101.6
1904	192.1	1914	132.4	1924	115.2	143.9	1934	96.9	103.1
1905	169.3	1915	145.9	1925	121.7	148.1	1935	104.2	106.8
1906	156.3	1916	163.3	1926	141.7	166.7	1936	119.6	119.9
1907	180.0	1917	164.5	1927	102.2	123.4	1937	114.9	118.9
1908	150.9	1918	588.5	1928	142.5	158.8	1938	80.4	82.2
1909	148.1	1919	223.0	1929	146.5	162.6	1939	75.7	76.5
							1940	70.3	66.9
							1941	63.7	62.7
							1942	-----	58.5

¹ Annual rate per 100,000 population.

The course of influenza and pneumonia mortality as given for the Registration States by the Bureau of the Census for 1900 to 1941 and also for the group of cities from 1920 to 1942 is shown in table 2 and plotted on a logarithmic scale in figure 2. The rates³ are for calendar years and include all deaths during both epidemic and nonepidemic periods. The course of influenza and pneumonia mortality (fig. 2) was downward in the Registration States prior to the influenza epidemic of 1918-19; from 1920 to 1930 there was some variability in the annual rates but not much trend is discernible; 1930 to 1935, inclusive, were relatively low years of influenza and pneumonia mortality; in 1936-37 there was some increase in the rates; beginning with the year 1938

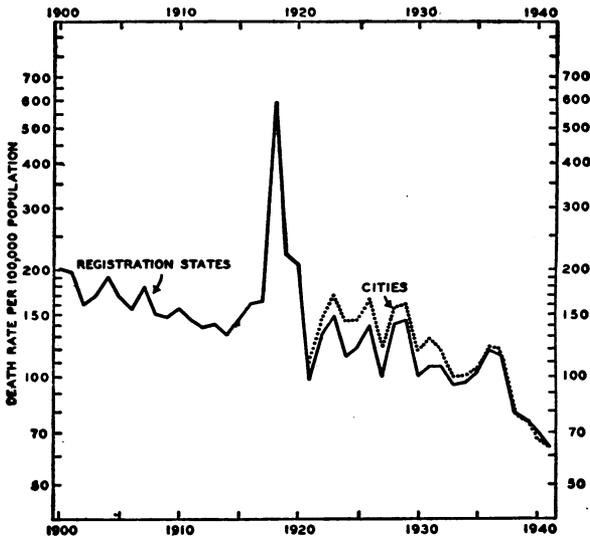


FIGURE 2.—Annual mortality from influenza and pneumonia in the Registration States, 1900-1941, and in a group of about 90 cities in the United States, 1920-41, plotted on logarithmic scale.

and continuing through 1941 (last available year) there was an accelerated decline in mortality from influenza and pneumonia.

The decline in pneumonia mortality since the winter of 1937-38, which is apparent in both annual level and severity of epidemics, is associated with a decline in case fatality rather than incidence. Reported cases of pneumonia for New York (9) and Massachusetts (5) show some variability but remain practically level from 1930 to 1940. Pneumonia incidence in the U. S. Army (10) increased during 1935 to 1940. Among industrial workers (8) also, pneumonia morbidity has increased during the 8 years 1935 to 1942, which may be partially attributed to the influx of new workers particularly in the iron and steel

³ In all tables the weekly rates for cities for the years since 1940 are based on populations estimated from sugar registration estimates for metropolitan areas as issued by the Bureau of the Census. Rates for the Registration Area are based on official Census population estimates.

industries. Pneumonia case fatality, however, has declined since 1933 in the U. S. Army. The Annual Report of the Surgeon General, U. S. Army (1941, p. 62) gives a table of case fatality rates which shows a decline from an average of 12.5 percent in 1929-31 to an average of 5.1 percent in 1937-39 with a further drop to 0.7 percent in 1940. The report for 1940 states that starting in 1935 there was a greater use of oxygen and serum therapy; the use of sulfa drugs was begun in 1938 and increased in 1939. With respect to the extent of use of sulfa drugs among the general population the Metropolitan Life Insurance Company (14) reports the results of an investigation made in the early months of 1941 of pneumonia deaths of industrial policyholders. Among those dying from lobar pneumonia, 84.3 percent had received chemotherapy and 11.5 percent had received both chemotherapy and serum.

TABLE 3.—Mortality from influenza and pneumonia in cities of nine geographic sections of the United States, 1920-42

Year ¹	All cities	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
	Annual rate per 100,000 including epidemic ²									
1920-21	112.6	119.9	121.6	89.6	111.1	134.2	131.3	115.4	171.5	72.3
1921-22	139.1	144.4	152.2	104.9	153.2	152.3	184.7	135.3	190.6	128.6
1922-23	170.8	163.7	169.9	157.9	169.7	220.3	240.7	163.1	191.9	115.0
1923-24	141.8	116.7	155.9	113.4	108.2	185.6	217.1	174.5	167.7	111.1
1924-25	145.8	133.7	159.2	122.5	95.4	179.9	217.5	186.5	176.9	124.2
1925-26	172.0	163.4	195.4	147.1	96.4	204.5	253.1	233.5	173.1	111.1
1926-27	126.0	121.3	141.1	104.1	85.7	153.8	149.4	149.3	158.3	111.0
1927-28	142.1	129.7	157.9	128.3	88.9	152.1	205.4	192.3	160.7	110.6
1928-29	176.6	157.8	184.4	154.8	143.5	202.5	283.4	226.5	224.8	154.6
1929-30	123.6	109.7	136.9	97.1	116.1	139.9	188.6	180.2	153.3	83.7
1930-31	134.3	119.3	156.1	98.5	132.1	179.2	184.1	164.6	148.3	79.2
1931-32	107.3	106.5	119.5	78.0	120.3	137.7	124.3	122.6	142.9	79.4
1932-33	107.7	106.5	110.0	77.9	152.5	135.6	141.3	167.6	159.0	83.5
1933-34	104.1	113.0	108.8	83.9	120.1	137.4	149.3	133.8	104.6	61.0
1934-35	106.5	112.3	101.0	90.9	130.0	152.1	154.6	148.8	135.7	66.3
1935-36	117.4	126.6	104.3	98.5	130.5	160.5	210.2	200.9	145.9	88.0
1936-37	122.2	136.5	107.2	101.3	124.3	163.0	195.7	197.6	193.7	115.1
1937-38	86.5	106.1	77.1	69.2	84.7	126.2	128.1	147.0	132.7	68.2
1938-39	82.4	100.3	68.8	74.9	91.9	103.4	121.8	146.9	111.7	62.6
1939-40	68.1	80.5	56.1	55.9	78.0	101.5	116.9	135.7	97.4	43.4
1940-41 ³	64.2	79.1	55.7	50.8	79.6	88.6	97.8	112.1	98.6	43.8
1941-42 ³	55.1	71.5	47.7	41.7	61.6	76.5	83.2	96.1	80.9	47.8

¹ Each yearly interval begins with the 32d calendar week and ends with the 31st calendar week (early August) of the year following.

² Annual rates excluding epidemics (plotted in fig. 3) can be obtained by subtracting the excess rates given in table 1 from the total rates as given in this table.

³ Rates for the calendar years 1941 and 1942 are based on populations estimated from sugar registration data, issued by the Bureau of the Census. Annual rates are averages of 52 weekly rates.

Table 3 and figure 3 show the course of influenza and pneumonia mortality in the group of 90 cities for summer-to-summer annual rates both including all epidemic excess deaths and also with epidemic excess deaths removed. Table 4 and figure 4 show the course of influenza and pneumonia for the 90 cities for each quarter separately; in this chart epidemic excess deaths are excluded. For both quarterly and annual rates an accelerated decline begins about 1938. The decline

is at approximately the same rate in the first, second, and fourth quarters but is at a somewhat slower rate for the third quarter (July–September). For all quarters except the first the rates appear to be leveling off beginning with about 1941. The fourth quarter of 1942 and the first quarter of 1943 show a definite increase in influenza-pneumonia mortality.

In the third and fourth quarters (July–September and October–December, respectively) of 1942 and the first quarter (January–March) of 1943 influenza and pneumonia mortality was higher than it was in any of the 3 preceding years, during which pneumonia mortality was declining. The excess in the rate for the third quarter of 1942 over

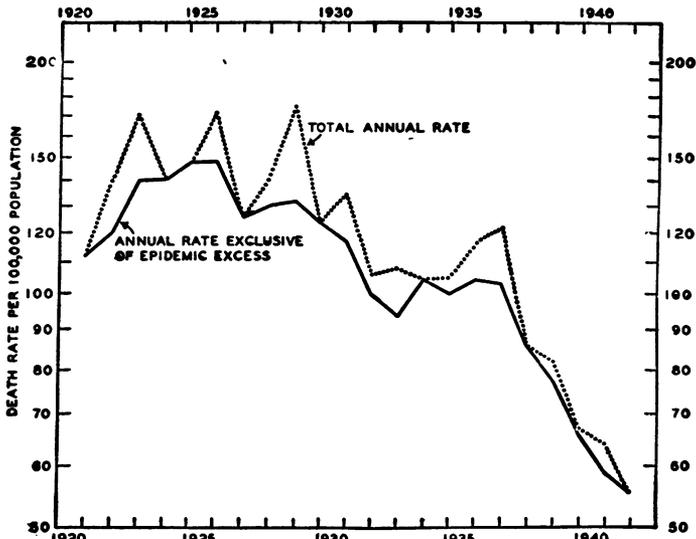


FIGURE 3.—Annual (August to July) mortality from influenza and pneumonia in a group of about 90 cities in the United States, August 1920 to July 1942, plotted on logarithmic scale. The dotted line represents a total annual rate, the solid line an annual rate exclusive of epidemic excess mortality.

the same quarter of 1941 was 6 percent; but this is not a larger excess for this quarter than has occurred in other successive years since 1920 (table 4). However, the excess in the rate for the fourth quarter of 1942 and the first quarter of 1943 over the rate for the same quarters of 1941 and 1942 was 22 and 15 percent, respectively, which, with one exception, is slightly larger than any corresponding annual percentage increase for these quarters since 1920, with epidemic excess removed. The returns from a 10-percent sample of current mortality in the United States published by the Bureau of the Census (11) indicated that from August to December pneumonia and influenza mortality maintained a high level in relation to the normal seasonal expectancy and that during January it dropped below the expected value for that month.

TABLE 4.—Quarterly mortality from influenza and pneumonia in a total of about 90 cities, 1920-42

Year ¹	3d quarter ¹	4th quarter ¹	1st quarter ¹	2d quarter ¹	Year ¹	3d quarter ¹	4th quarter ¹	1st quarter ¹	2d quarter ¹
Quarterly rate (annual basis) per 100,000, exclusive of epidemic excess									
1920-21...	51.8	111.9	188.9	100.2	1932-33...	47.6	89.2	137.2	83.1
1921-22...	49.4	104.8	206.2	120.5	1933-34...	46.9	103.6	157.9	106.5
1922-23...	51.2	125.2	231.7	151.0	1934-35...	50.0	93.4	152.5	108.5
1923-24...	63.0	125.4	222.3	157.1	1935-36...	50.5	98.5	163.4	105.5
1924-25...	58.2	138.1	240.4	147.5	1936-37...	51.4	109.0	161.3	96.2
1925-26...	63.3	141.1	237.5	144.6	1937-38...	50.2	95.6	129.1	74.3
1926-27...	59.1	124.4	194.0	127.7	1938-39...	45.0	80.3	121.3	65.0
1927-28...	58.0	113.9	205.1	142.5	1939-40...	36.6	62.3	104.1	61.0
1928-29...	63.0	125.7	221.9	119.1	1940-41 ² ...	36.3	56.6	90.3	52.0
1929-30...	59.0	124.7	187.1	124.5	1941-42 ² ...	35.3	54.0	81.1	49.7
1930-31...	56.5	108.6	187.1	119.9	1942-43 ² ...	37.8	65.8	93.2	-----
1931-32...	53.9	89.1	151.9	106.4					

¹ The calendar weeks included in each quarter of a year are as follows:

- 3d quarter: 27th-39th week (July-September).
- 4th quarter: 40th-52d or 53d week (October-December).
- 1st quarter: 1st-13th week (January-March).
- 2d quarter: 14th-26th week (April-June).

² Rates for the years 1941 and 1942 are based on populations estimated from sugar registration data, issued by the Bureau of the Census.

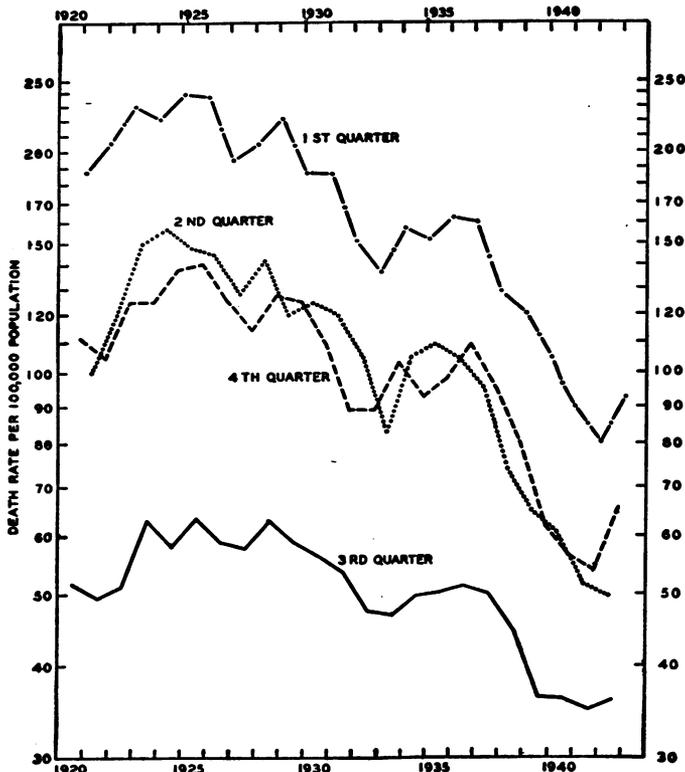


FIGURE 4.—Quarterly mortality (annual basis) from influenza and pneumonia exclusive of epidemic excess mortality in a group of about 90 cities in the United States, July 1920 to December 1942, plotted on logarithmic scale. The third quarter includes the 27th to the 39th week (July to September); the fourth quarter the 40th to the 52d or the 53d week (October to December); the first quarter the 1st to the 13th week (January to March); and the second quarter the 14th to the 26th week (April to June).

INFLUENZA AND PNEUMONIA MORTALITY IN CITIES OF NINE GEOGRAPHIC AREAS, 1935-42

Figure 5 and table 3 show the trend of influenza and pneumonia mortality in each of nine geographic sections. The dotted line represents the total annual rate (August to July); the solid line is exclusive of epidemic excess. The rates with epidemic excess removed show a decline in each section, with an increased rate of decline beginning with the year 1937-38.

Table 5 gives influenza and pneumonia mortality rates (annual basis) for 3-month periods from July 1940 to March 1943 for cities grouped in nine geographic sections. For all of the sections in the first quarter of 1941 and for four sections in the fourth quarter of 1940 two sets of rates are given in the table, that is, both including and excluding epidemic excess rates. In the third quarter of 1942 the New England, South Atlantic, East South Central, and Pacific sections had pneumonia rates which were significantly higher than in the same quarter of 1941; in the fourth quarter all sections except the West South Central and possibly the Mountain had significantly higher influenza and pneumonia rates in 1942 than in 1941; and in the first quarter all sections except the South Atlantic, East South Central, and the Pacific had significantly higher rates in 1943 than in 1942.

Weekly excess influenza and pneumonia mortality for a total of all cities and for cities of nine geographic areas is shown in figure 6. The vertical broken lines on the chart represent the middle of the

TABLE 5.—Quarterly mortality from influenza and pneumonia in cities of nine geographic sections of the United States, July 1940 to March 1943

Quarter year	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Quarterly rate (annual basis) per 100,000 ¹									
3d quarter: ²									
1940.....	43.5	32.3	27.6	49.0	45.0	48.6	67.3	56.7	26.7
1941.....	37.5	32.9	25.3	46.0	42.7	43.8	75.1	51.1	26.3
1942.....	45.5	34.4	25.6	44.5	49.9	52.1	72.5	48.7	31.2
4th quarter: ²									
1940: epidemic excess included.....	73.5	44.4	49.5	74.9	70.0	70.9	103.1	133.7	57.5
1940: epidemic excess excluded.....	73.5	44.4	49.5	73.2	70.0	70.9	94.6	125.8	36.1
1941.....	67.6	47.2	42.6	59.3	71.5	77.8	104.4	89.8	28.7
1942.....	99.6	56.9	49.4	74.9	97.5	92.3	89.1	97.9	57.5
1st quarter: ²									
1941: epidemic excess included.....	143.2	96.4	84.4	129.8	166.4	203.8	193.8	155.3	59.5
1941: epidemic excess excluded.....	93.4	79.9	76.8	102.7	143.9	143.0	149.4	100.6	46.3
1942.....	100.3	69.7	62.4	85.9	126.2	137.5	128.3	93.7	72.3
1943.....	132.3	81.4	69.7	115.2	130.0	133.9	151.4	116.2	71.9
2d quarter: ²									
1941.....	60.0	48.3	41.7	63.2	77.3	72.9	83.2	55.5	30.7
1942.....	81.6	41.1	38.3	56.8	59.9	66.7	75.9	83.4	50.4

¹ Rates for the years 1941 and 1942 are based on populations estimated from sugar registration data, issued by the Bureau of the Census.

² The calendar weeks included in each quarter of a year are as follows:

3d quarter: 27th-39th week (July-September).

4th quarter: 40th-52d or 53d week (October-December).

1st quarter: 1st-13th week (January-March).

2d quarter: 14th-26th week (April-June).

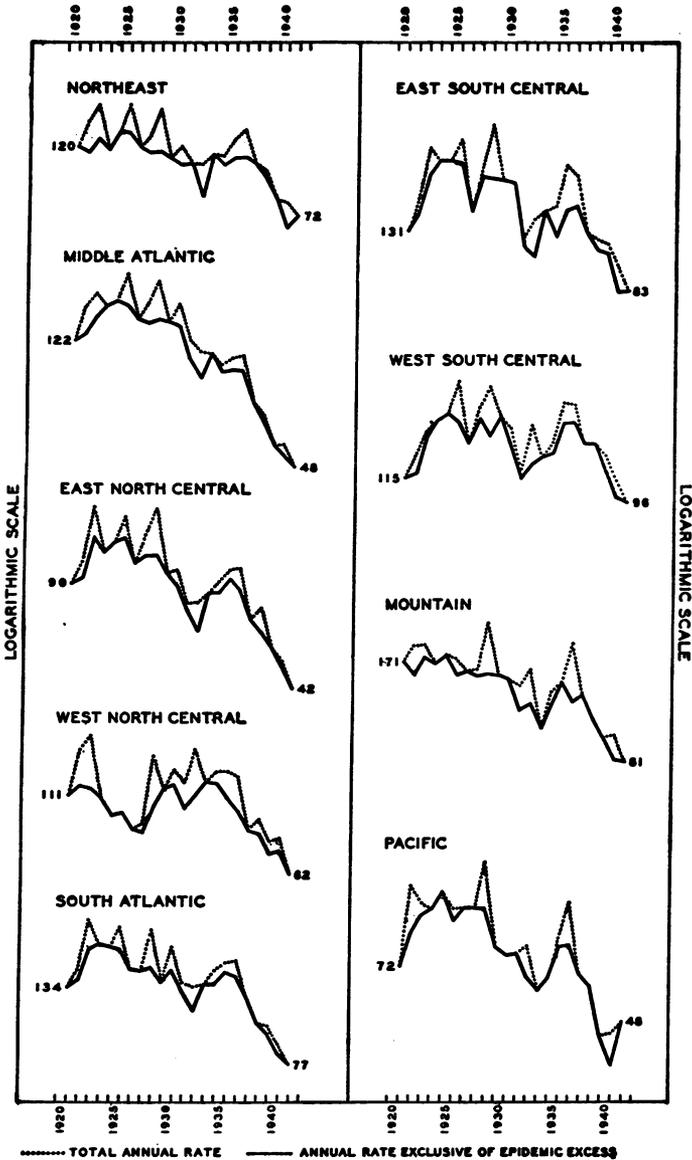


FIGURE 5.—Annual (August to July) mortality from influenza and pneumonia in cities of nine geographic sections of the United States, August 1920 to July 1942. The dotted line represents total annual rates; the solid line annual rates exclusive of epidemic excess mortality. Numbers at ends of lines are rates for first and last year.

median week of each epidemic, computed from the excess rates for all sections combined.

During the winters of 1935-36 and 1936-37 influenza epidemics reached fair proportions in some of the sections. In 1936-37 the East South Central, West North Central, West South Central, Mountain, and Pacific sections had maximum excess weekly rates (annual basis) of 300 to 700 per 100,000 population. The influenza epidemics since 1937 have been minor, with maximum weekly excess rates of approximately 200 or less per 100,000 (fig. 6).

TABLE 6.—Date of median day and number of weeks included in each epidemic of influenza in cities of nine geographic sections of the United States, 1935-42

Median day and extent of epidemic	All cities	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Epidemic of 1935-36										
Median day ¹	Mar. 11	Feb. 12 ²	Mar. 4	Apr. 13	Mar. 18	Feb. 27	Mar. 11 ³	Mar. 27	None	Mar. 2
Number of weeks included.....	22	14	8	9	16	8	24	12	None	6
First and last week ³	52-21	52-13	7-14	12-20	5-20	6-13	49-20	8-19	None	7-12
Epidemic of 1936-37										
Median day ¹	Jan. 22	Feb. 1	Jan. 13	Jan. 9	Jan. 21	Feb. 4	Mar. 1	Feb. 15	Jan. 17	Feb. 3
Number of weeks included.....	11	12	7	13	9	16	15	8	11	9
First and last week ³	52-9	51-9	53-6	50-9	53-8	49-11	5-19	3-10	51-8	1-9
Epidemic of 1938-39										
Median day ¹	Mar. 5	Mar. 21	Feb. 11	Mar. 4	Mar. 11	None	Mar. 23	None	None	None
Number of weeks included.....	9	6	7	7	7	None	7	None	None	None
First and last week ³	6-14	9-14	4-10	7-13	8-14	None	9-15	None	None	None
Epidemic of 1939-40										
Median day ¹	Feb. 10	None	None	None	Feb. 11	Feb. 5	Feb. 11	Feb. 11	None	None
Number of weeks included.....	6	None	None	None	8	5	4	8	None	None
First and last week ³	4-9	None	None	None	3-10	4-8	5-8	4-11	None	None
Epidemic of 1940-41										
Median day ¹	Jan. 22	Jan. 21	Feb. 1	Feb. 2	Jan. 19	Jan. 30	Jan. 19	Jan. 8	Jan. 8	Dec. 25
Number of weeks included.....	10	6	6	4	10	8	6	7	6	7
First and last week ³	51-8	2-7	3-8	4-7	52-9	3-10	1-6	51-5	52-5	49-3

¹ The median day was determined as for a frequency distribution; the excess rates were considered as frequencies. Due to variability of the rates the probable error of the median day is large.

² The 1935-36 epidemic was bimodal in the New England and East South Central sections. In New England the median day of the first part of the epidemic was Jan. 7, of the second part Feb. 26; in the East South Central the median day of the first part of the epidemic was Dec. 23, of the second part Mar. 22.

³ The first and last week of an epidemic are given in calendar weeks; if January 1 falls on Wednesday or earlier in the week that week is counted as the first of a specific year.

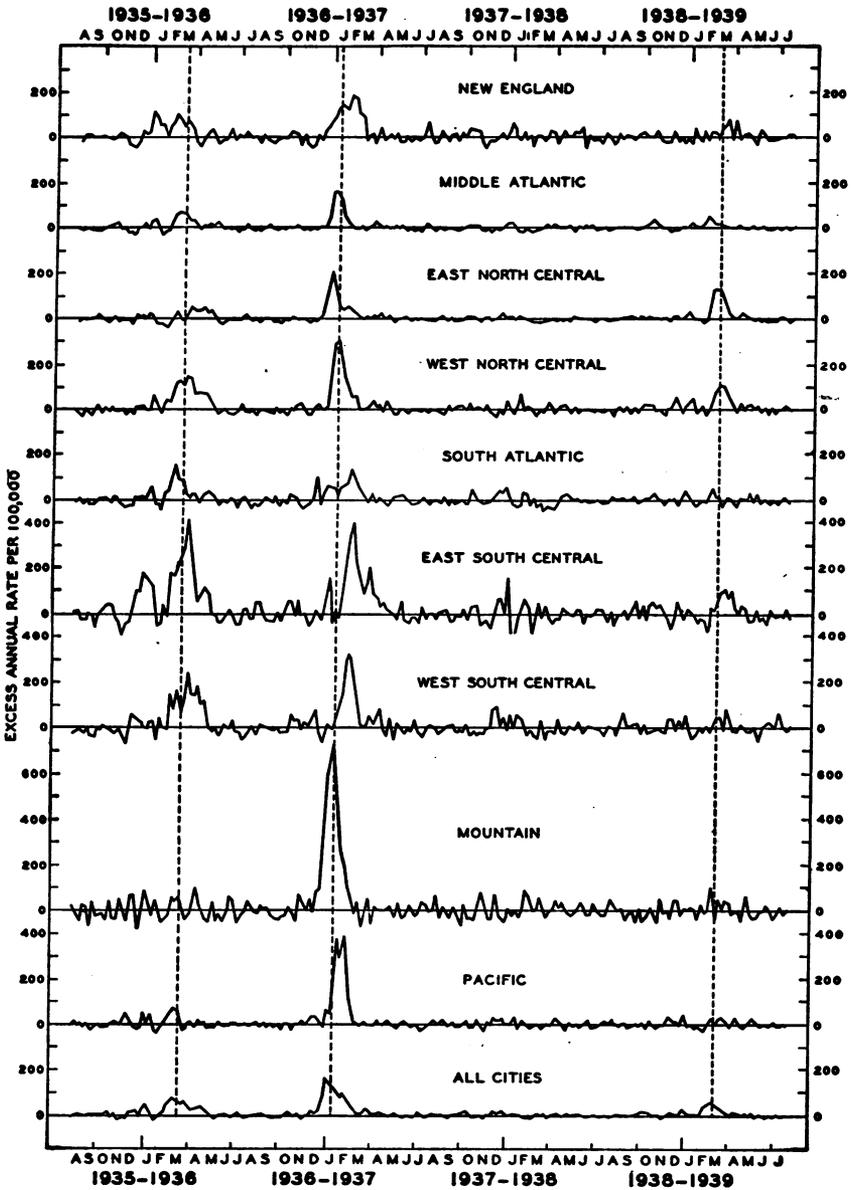
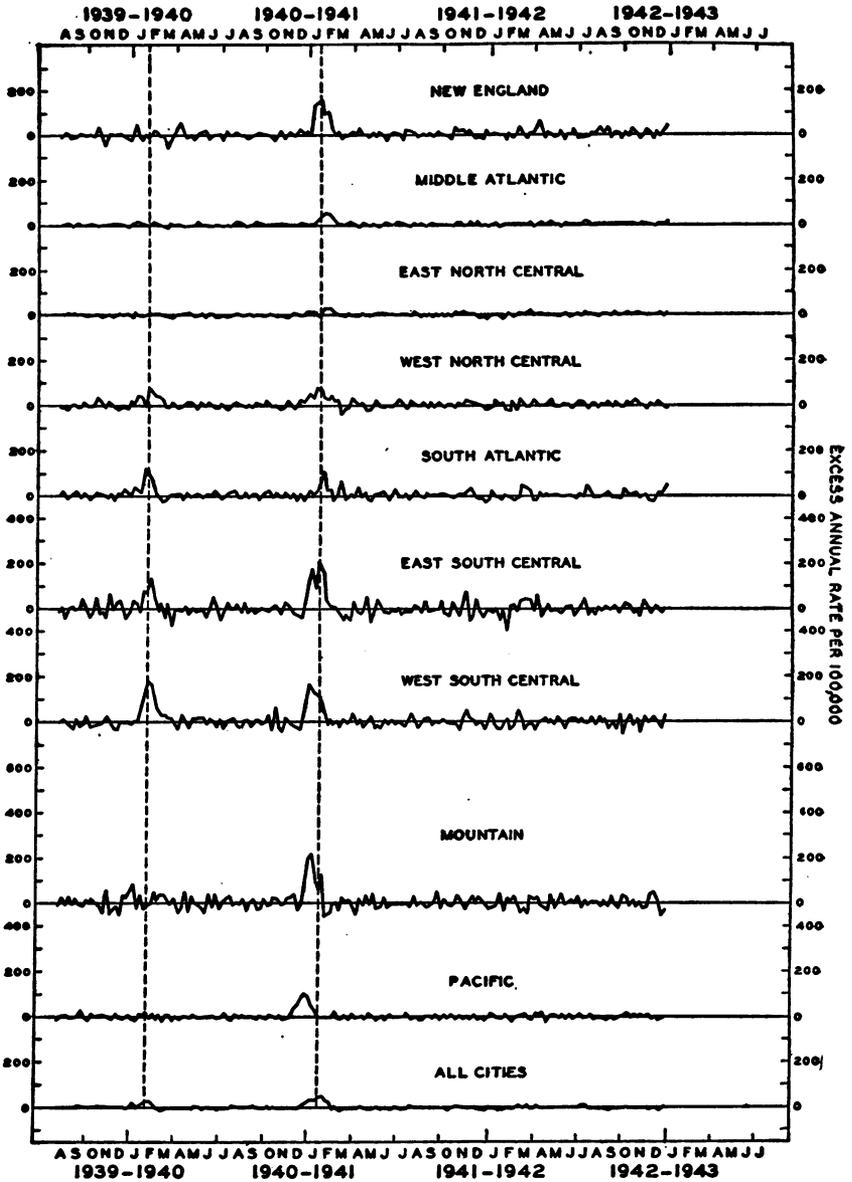


FIGURE 6.—Weekly excess mortality (annual basis) from influenza and pneumonia
(See appendix for method of



in cities of nine geographic sections of the United States, August 1935 to July 1942. (computation of excess rates.)

The epidemic of 1935-36 (fig. 6) was long continued and not very explosive in any section. The outbreak started at approximately the same time in two sections, New England and the East South Central, where it was definitely bimodal; in both sections the first peak occurred at the end of December and the second in February or March. The West North Central and South Atlantic regions show slight epidemic excesses in January. The peak weeks of the second part of the epidemic extend in the several geographic sections from the latter part of February to the early part of April. The Mountain region showed no epidemic excess in this year and the Pacific a slight excess only.

The epidemic of 1936-37 extended over the entire country with the highest rates in the Mountain region. The epidemic began in the East North Central section and spread from there to the East, South, and West.

The epidemic of 1938-39 was small and limited to five geographic sections. It occurred first in the Middle Atlantic (with very small excesses) and in the East North Central regions and spread into the New England, West North Central, and East South Central sections.

The epidemic of 1939-40 was also very small and occurred in only four of the nine geographic sections. It began in the South Atlantic and spread later to the West North Central, East South Central, and West South Central regions.

The epidemic of 1940-41 was small but occurred to some extent in all geographic sections. It started on the Pacific Coast and spread East over both a northern and southern route (7).

The year 1942-43 thus far (April 1943) shows no epidemic excess in any of the sections.

SUMMARY

A record of weekly mortality from influenza and pneumonia in a group of about 90 cities in the United States was reported upon earlier for the years 1920-35; this record has been brought up to 1943. Since the summer of 1937, pneumonia mortality has declined markedly. An average of the rates for the last 5 years (1938-42) compared with the 5 preceding years (1933-37) shows a decline of approximately 40 percent (from a rate of 110 to 69 per 100,000). Annual rates for quarterly periods with epidemic excess deaths excluded show less of a decline for the third quarter (July to September) than for other quarters of the year. The decline has occurred in all geographic sections. However, mortality from influenza and pneumonia for all cities was higher in the third and fourth quarters of 1942 and the first quarter of 1943 than it was in the same quarter of the 3 preceding years; the excess over the same quarter of the preceding year was greater in the

fourth quarter of 1942 and the first quarter of 1943 than in the third quarter of 1942.

Epidemics of minor intensity occurred in five of the eight winters since August 1935. Three of these epidemics were practically Nationwide, 1935-36, 1936-37, and 1940-41. The epidemics of the winters of 1938-39 and 1939-40 were confined to four or five of the nine geographic sections of the country. The year 1942-43 thus far shows no epidemic excess in any of the sections.

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Appendix

The method of computing a normal seasonal curve of influenza and pneumonia mortality which was used for the years 1920-35 has been described in detail in earlier reports (2, 3). For the years 1920-29 the normal seasonal curve was based on median rates for each week for the 7-year period 1921-27; the 52 weekly medians were smoothed by a 5-week moving average and used for the whole 10-year period without adjustment for change in average annual level of the rates. For the years 1930-35 the normal seasonal curve was based on the mean of the rates for corresponding weeks in the 4 years 1930-33 with interpolated values

substituted for obviously epidemic rates. The 52 weekly values in these 4-year means of rates with epidemic items removed were smoothed by a 5-week moving average and used as a relative basis for seasonal expectancy. Adjustment for the change in level from year to year in the average annual influenza and pneumonia death rate was made by multiplying each of the 52 weeks of the normal seasonal curve by a constant; this constant was the ratio of the average of the 52 rates for a specific year (with epidemic items replaced by interpolated values) to the average of the 52 rates of the normal seasonal curve, the process being repeated for each of the nine geographic sections. The curve of normal seasonal expectancy adjusted to the level of the year in question was then subtracted from the actual rates to give weekly excess rates for each year. Although there was some downward trend in influenza and pneumonia rates from 1930 to 1935 this method gives a reasonable normal seasonal curve from which to obtain excess rates. The method is not refined but influenza epidemics are of such magnitude that small differences in normal seasonal expectancy are almost negligible in comparison.

Some change in the method of computing a normal seasonal curve of influenza and pneumonia was made necessary by the rapid decline in the rates which has taken place since 1937. If the 52 smoothed mean rates obtained from the 3-year period 1939-42 are multiplied by a constant ratio, as was done for the years 1930-35, a derived normal seasonal curve is obtained which gives a very poor fit to the rates for the period 1935-37. This is due at least in part to the fact that influenza-pneumonia mortality during this period declined at a slower rate during the third quarter (July-September), so that the seasonal curve of influenza and pneumonia mortality has a smaller amplitude in the year 1941-42 than it had in 1935-36.

To avoid this difficulty the level of the normal seasonal curve used since 1935 is adjusted quarterly instead of annually. The detailed computations were made as follows: The normal seasonal curve was based on the mean of the rates for corresponding weeks in the 3 years ended in August (31st week) of 1942, with interpolated values substituted for obviously epidemic rates. This period was chosen because of the small number of epidemic items and the similarity of the seasonal incidence in the 3 years. The 52 weekly values in these 3-year means of rates (with epidemic items replaced by interpolated values) were smoothed by a 5-week moving average and used as a relative basis for seasonal expectancy. Adjustment for change in level of the actual rates was made at quarterly intervals by the following procedure: The average of the actual rates (epidemic items replaced by interpolated values) for the 13 weeks of each quarter for each year was related to the average of the rates for the 13 weeks of the corresponding quarter of the normal seasonal curve to obtain a ratio of the actual to the expected rate for each quarter of each year. Between these quarterly ratios (centering in the middle of each quarter) straight line interpolations were made to get such a ratio for each week of each year. Then the rate in the normal seasonal curve for a given week was multiplied by the above ratio for the corresponding week to obtain a seasonal expectancy for each week of each year, this process being repeated for each of the nine geographic areas. The norm or expectancy for each week of each year for all sections combined was obtained by a weighted average of the nine sectional norms for that week, with the populations of the respective sections as the weights.

The method of deriving a normal seasonal curve of influenza and pneumonia as outlined above is admittedly rough. Moreover, the use of quarterly ratios results in a changing yearly norm which seems to be necessary for the years during which the decline was rapid. The seasonal norms as computed, however, serve as

a base from which to estimate the approximate magnitude of marked fluctuations such as occur in influenza epidemics.

Appendix tables A-J give the deviations from the seasonal expectancy for each section, together with the seasonal norms and other data necessary to derive the actual rates.

TABLE A.—*Excess weekly death rates (annual basis) per 100,000 from influenza and pneumonia, 1935-42*

ALL 90 CITIES

Week of year	Smoothed mean 1939-42	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43
32	36	-4	-7	+2	+1	-5	0	0	-6
33	35	-2	-7	-2	-1	+2	-5	-1	+1
34	33	-3	+1	-3	+2	+1	0	-2	+2
35	33	-2	+1	+2	+7	-1	-2	-3	+2
36	35	-5	-4	-6	-3	-2	-1	+2	-7
37	37	-6	-9	-12	-1	+3	+5	-4	+2
38	38	0	-8	-2	0	-1	+1	0	-5
39	40	+2	-9	+1	+5	+6	-1	+3	-1
40	41	0	-7	+5	+5	-1	+1	-3	+5
41	44	+2	-6	+12	+12	-3	+5	+1	+2
42	45	+5	+6	+12	+13	-1	-6	-7	+4
43	48	+15	+11	+5	+11	+6	+3	+4	+3
44	51	-2	-3	-9	-1	-1	-1	+4	-3
45	55	-3	+1	-5	-5	-4	-6	+4	-4
46	57	-18	-3	-3	-6	+5	0	+3	+2
47	60	-13	-10	-15	-11	+2	-2	+6	-2
48	63	-16	-4	-5	+6	-3	+1	+2	-5
49	66	+13	+4	0	+6	+2	0	+2	+2
50	69	+12	+17	+19	-1	0	+7	-5	+2
51	75	+17	+10	+11	+1	0	+7	-3	-6
52	81	+5	+18	+21	+9	-5	+15	-10	+9
53			+71					-9	
1	86	+36	+157	+15	+22	+4	+30	+4	
2	91	+41	+138	-4	+8	+18	+34	+2	
3	95	+12	+128	-5	-6	+6	+32	-8	
4	96	-19	+108	+5	-6	+9	+48	-10	
5	96	-13	+83	+1	+2	+18	+53	-4	
6	97	-2	+94	-3	+8	+27	+33	-4	
7	97	+13	+77	-12	+26	+28	+25	-6	
8	96	+55	+53	-11	+44	+16	+4	-6	
9	93	+71	+31	-14	+53	+3	+5	+6	
10	91	+65	+5	-6	+50	-2	-1	+9	
11	88	+53	+7	+2	+38	-14	-7	0	
12	84	+47	+11	0	+28	-2	+2	+13	
13	81	+59	+25	+5	+15	-4	+3	-2	
14	79	+39	+10	-8	+8	0	+2	-2	
15	74	+23	+13	-2	-3	+1	-2	+9	
16	69	+27	+10	+5	+11	-3	+7	-3	
17	64	+33	+6	+4	+4	+2	-3	+3	
18	60	+34	+4	+1	+1	-3	-6	0	
19	56	+25	+3	-1	+7	-1	-5	0	
20	52	+8	-2	+6	-5	+7	-1	-3	
21	49	+2	+6	+4	+8	+4	-2	-1	
22	46	-17	+2	0	-4	-3	+2	+2	
23	44	-4	-4	0	-5	0	+3	-6	
24	41	-3	-9	+1	-9	+3	-4	-4	
25	39	-4	-6	-7	-3	+2	-3	+1	
26	38	-4	-9	-1	-5	-3	+5	-2	
27	37	-8	-7	-3	-6	-8	+5	+1	
28	37	-1	+7	-2	+1	-4	-1	+6	
29	38	+7	-7	-9	-2	-1	-4	+8	
30	37	-7	-10	-6	-6	+2	-1	-1	
31	37	-10	-3	-1	-4	+9	+11	0	

Quarterly factors for adjustment of smoothed mean to obtain annual norms

3d quarter (27th-39th week)	1.388	1.415	1.382	1.232	1.007	0.998	0.971	1.026
4th quarter (40th-52d week)	1.694	1.734	1.644	1.338	1.071	.967	.912	1.132
1st quarter (1st-13th week)	1.787	1.788	1.408	1.321	1.142	.992	.885	
2d quarter (14th-26th week)	2.068	1.758	1.361	1.193	1.117	.952	.909	

TABLE B.—Excess weekly death rates (annual basis) per 100,000 from influenza and pneumonia, 1935-42

NEW ENGLAND

Week of year	Smoothed mean 1939-42	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43
32	38	-18	-23	+25	+20	-21	-5	-10	+10
33	33	+12	+12	+10	-3	+5	-5	0	+23
34	31	+9	-10	-11	+5	+5	-10	+4	+5
35	33	+8	-12	+9	+2	-15	-8	-3	+26
36	37	-1	-20	+10	-10	-14	+1	+8	-14
37	41	-2	-14	-15	+6	0	+7	-13	+3
38	45	-2	-13	+15	+16	+5	+5	+11	-1
39	48	+4	-3	+8	+18	+2	0	+3	-17
40	48	-4	-3	+35	+11	-2	-2	+3	+7
41	53	-4	+26	+35	+3	0	-8	-4	-11
42	58	+1	+18	+33	+10	-10	-22	-26	+19
43	61	+23	+19	+30	+28	+42	-10	+24	+7
44	66	+11	-36	-17	-7	0	+16	+12	-18
45	75	+5	+12	-43	-20	-45	-18	+19	-5
46	75	-29	-24	-15	-21	+3	0	-1	+11
47	75	-35	-40	-17	-20	+7	+10	+16	+5
48	80	-40	-36	-11	+30	-1	-4	-1	-26
49	81	-16	+15	+8	-22	+2	+6	-25	+6
50	84	+32	-18	+19	0	+5	+24	-15	-9
51	87	+16	+27	-2	-27	-6	+7	-23	+0
52	96	+22	+45	+33	-7	-15	+14	+15	+29
53			+71					-6	
1	99	+117	+92	+59	-28	-19	-6	+4	
2	104	+94	+127	-3	+33	+49	+126	+2	
3	104	+50	+136	-11	+4	0	+144	-8	
4	107	+63	+134	+22	-22	-19	+155	-1	
5	105	+10	+125	-7	+32	+6	+87	-19	
6	107	+48	+190	+5	-8	-9	+97	+5	
7	112	+69	+173	-44	+27	+19	+39	-14	
8	111	+100	+108	+8	+20	+14	-5	-5	
9	109	+84	+87	+4	+8	-5	+15	+33	
10	107	+53	-11	-14	+47	-2	-21	-7	
11	105	+75	+13	-1	+57	-61	-4	-19	
12	100	+57	+23	+32	+79	-27	-4	+2	
13	102	+39	-30	+22	-10	-2	+10	-4	
14	101	-26	+34	-30	+82	+20	-1	+29	
15	97	-37	-12	-4	-12	+56	+25	+62	
16	90	0	-1	+26	+12	+7	-1	-18	
17	85	+22	+8	+6	+17	-10	-12	-1	
18	78	+36	0	-3	+3	-4	-13	-4	
19	76	+19	+13	+25	-12	-17	+9	-8	
20	73	-29	-21	+21	-31	+8	-13	-8	
21	66	-13	-14	+36	+36	+10	+7	+17	
22	62	-12	+5	-49	+18	+21	+3	-27	
23	60	+12	-18	+10	-11	-19	-31	-13	
24	54	+37	-4	-9	-12	0	-6	-9	
25	48	-13	-9	-11	+13	+1	+10	+20	
26	48	+13	-10	-13	-9	+9	+5	-13	
27	47	+8	+1	-16	0	-20	+1	-19	
28	45	+25	+68	+11	+3	+21	-25	-14	
29	44	+12	+1	0	+7	-3	+18	-15	
30	42	+2	-19	-30	+10	+5	+9	0	
31	41	+11	-19	-19	-7	+11	+5	-4	

Quarterly factors for adjustment of smoothed mean to obtain annual norms

2d quarter (27th-39th week)	1.253	1.396	1.616	1.326	1.065	1.079	0.931	1.128
4th quarter (40th-52d week)	1.388	1.566	1.145	1.160	1.038	1.017	.916	1.377
1st quarter (1st-13th week)	1.609	1.643	1.535	1.357	1.154	.887	.949	
2d quarter (14th-26th week)	1.574	1.502	1.481	1.248	1.151	.831	1.132	

TABLE C.—Excess weekly death rates (annual basis) per 100,000 from influenza and pneumonia, 1935-42

MIDDLE ATLANTIC

Week of year	Smoothed mean 1939-42	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43
22	31	+4	-5	-2	-1	-2	+4	-3	-4
23	30	-4	-7	-5	0	0	-9	+4	-2
24	29	-2	+1	0	-1	+5	-4	-2	+3
25	30	-3	+7	-1	+2	-2	-2	-7	-5
26	31	-7	-3	-13	-6	-6	+6	+6	-4
27	32	-8	-8	-14	-4	+4	+5	-6	-2
28	34	-9	-9	-5	+1	+1	+6	0	-1
29	35	+2	-2	-2	+5	+3	-1	-1	+2
30	35	+6	-6	+10	+9	0	-1	-2	+4
31	35	+13	-1	+12	+19	+4	+2	+2	-4
32	38	+15	+1	+13	+36	-4	-3	-7	-2
33	40	+28	+8	+10	+16	-4	+1	+2	+3
34	42	-1	+1	-6	+5	+3	+4	+7	-7
35	46	-2	-6	-7	-4	-1	-2	+4	+6
36	48	-21	+1	-5	-5	+4	+4	-6	+2
37	50	-14	-6	-21	-18	+5	-6	-1	0
38	52	-23	+1	0	-9	+6	-1	-6	-6
39	54	-1	-5	-10	-8	+3	-4	+9	-1
40	55	+2	+2	0	-2	-3	+7	-3	+2
41	59	+24	+3	+18	-1	-5	-2	+4	+5
42	64	-4	0	+18	+3	-11	-13	-3	+5
43			+44					-4	
1	68	+32	+163	+22	+16	+7	+3	0	
2	73	+42	+158	0	+12	+7	+7	+4	
3	78	+10	+138	-11	+3	+8	+14	-14	
4	80	-31	+62	-15	+10	+4	+40	+4	
5	81	-15	+23	-8	+19	-2	+56	+1	
6	82	-6	+4	-23	+51	-2	+53	+2	
7	82	+21	+3	-15	+28	+12	+35	-3	
8	82	+56	-4	-9	+14	+1	+16	+1	
9	79	+69	+12	-6	+15	-1	0	+1	
10	78	+72	-13	-2	+13	-9	+2	+7	
11	75	+59	+2	+17	+6	-15	-5	-4	
12	73	+34	+12	+5	+2	+5	+11	+15	
13	70	+38	+27	+15	+2	-5	+6	-11	
14	69	+24	+16	+8	-1	0	-3	0	
15	63	-3	+3	+3	+7	+2	-9	+6	
16	60	+7	+10	-2	+1	-4	+14	-1	
17	56	+7	+3	+3	-4	-3	+3	-1	
18	53	+19	+2	+6	0	-5	-7	+5	
19	48	+17	+5	-13	+11	+1	-2	-1	
20	45	+25	+4	+8	-1	+15	-4	-1	
21	43	+16	+11	+5	-1	+2	-9	-7	
22	40	-10	-10	+8	+7	-2	+5	+3	
23	37	-1	+1	+3	-5	+3	+8	-6	
24	36	-5	-12	+9	-5	-4	+1	-7	
25	34	-3	-6	-9	-6	+5	-7	-3	
26	33	-19	-18	-8	0	-5	+9	-4	
27	32	-10	-6	-5	-7	-8	+7	+1	
28	32	-12	+20	0	-4	0	+6	+12	
29	32	+15	+4	-8	-4	-9	-7	+13	
30	32	-7	-11	-2	-8	-1	-2	-5	
31	31	-12	0	+2	0	+10	+10	-2	

Quarterly factors for adjustment of smoothed mean to obtain annual norms

3d quarter (27th-39th week)	1.489	1.449	1.477	1.214	.930	1.022	1.041	1.088
4th quarter (40th-52d week)	1.891	1.780	1.701	1.268	1.051	.935	.975	1.197
1st quarter (1st-13th week)	1.910	2.075	1.485	1.376	1.159	1.024	.904	
2d quarter (14th-26th week)	2.136	1.910	1.518	1.237	1.140	1.021	.866	

TABLE D.—*Excess weekly death rates (annual basis) per 100,000 from influenza and pneumonia, 1935-42*

EAST NORTH CENTRAL

Week of year	Smoothed mean 1939-42	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43
32	26	-10	+3	+10	-7	-4	-7	+5	-4
33	26	-4	-13	+8	-2	-2	-2	-8	-2
34	23	+1	+1	-6	+3	+7	-1	-3	+3
35	24	-2	-2	+3	+8	+1	+3	-4	+1
36	25	-4	-1	-8	+4	+11	-6	-8	-2
37	25	+5	-7	-11	-4	-3	+7	-1	+8
38	29	+19	-10	-5	-4	+5	-1	-2	-5
39	32	+3	-18	+8	+12	+1	-3	+6	+3
40	34	-13	-8	+12	+2	-5	-4	-8	+5
41	37	-17	-7	+12	+11	+4	+10	+6	+7
42	38	0	+8	+6	-1	-2	-4	-2	-5
43	42	+9	+1	+1	-1	+5	-7	+11	-1
44	42	-6	-7	-10	-2	-12	-2	+5	+2
45	45	-5	+9	+9	+2	+3	-4	+13	-4
46	46	-5	-4	+4	-3	+6	-16	+6	-1
47	50	-6	-18	-8	-8	-6	+1	-3	-1
48	52	-23	+1	-2	+12	-3	+8	+2	0
49	56	+22	-7	+4	+4	+4	+2	+1	+3
50	60	+8	+3	+27	-5	+4	-1	-10	+2
51	65	+13	+19	+7	+4	+2	+2	-7	-13
52	71	+2	+60	+7	+19	+2	+14	-15	+10
53			+152					-4	
1	74	+23	+212	+4	+31	-7	+8	+4	
2	77	+20	+126	-2	-2	+18	+11	+1	
3	79	-14	+56	+14	0	-3	-8	-6	
4	81	-18	+41	+1	-8	+2	+16	-22	
5	80	-24	+51	+2	-17	+5	+32	-5	
6	81	-37	+52	-8	-7	+11	+26	+4	
7	82	-20	+34	-15	+63	+5	+24	-8	
8	81	+7	+22	-16	+128	+3	0	-4	
9	77	+25	+12	-17	+133	-2	+2	+4	
10	75	-5	0	-11	+130	-4	-2	+2	
11	71	-6	+9	-5	+90	-7	-5	+3	
12	68	+17	-3	-4	+52	-13	+4	+19	
13	65	+53	+17	+6	+19	-9	-6	+3	
14	64	+38	+5	-6	-1	+2	-4	+3	
15	60	+32	+27	-2	+6	+2	-7	+3	
16	58	+34	+4	-7	+23	+2	+7	+1	
17	53	+51	+5	-4	+16	+6	-6	+2	
18	50	+30	+18	-9	+4	+1	-3	0	
19	46	+35	-14	+14	+3	-6	-7	-1	
20	44	+5	+2	+3	-5	+5	-1	-5	
21	42	-11	+6	+1	+1	+6	+5	-6	
22	41	-27	+14	0	-11	-9	+5	+7	
23	38	-14	-5	+4	-6	+5	+3	-8	
24	36	-7	-9	+1	-12	+11	0	-1	
25	33	-1	-2	-7	-10	-6	-4	-1	
26	31	+2	-6	+5	-9	-4	0	+2	
27	29	-3	-4	+6	-6	0	+4	-4	
28	28	+9	-9	0	+1	-6	+2	+3	
29	29	+15	-12	-9	-7	-2	-4	+6	
30	29	-3	-9	-6	-12	+3	-3	-2	
31	27	-9	-10	-4	-3	+6	+21	-2	

Quarterly factors for adjustment of smoothed mean to obtain annual norms

3d quarter (27th-39th week)	1. 766	1. 605	1. 341	1. 284	1. 004	1. 007	0. 920	0. 934
4th quarter (40th-52d week)	1. 687	1. 678	1. 730	1. 393	1. 089	1. 010	. 846	1. 007
1st quarter (1st-13th week)	1. 845	1. 753	1. 288	1. 279	1. 127	1. 015	. 817	
2d quarter (14th-26th week)	2. 390	1. 890	1. 245	1. 166	1. 184	. 910	. 836	

TABLE E.—*Excess weekly death rates (annual basis) per 100,000 from influenza and pneumonia, 1935-48*

WEST NORTH CENTRAL

Week of year	Smoothed mean 1939-42	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43
32	48	-7	-27	-10	+6	-9	+14	-8	-16
33	43	-26	+3	-19	+6	-10	+4	-4	+1
34	40	+7	-1	-15	-8	-19	-4	+10	+3
35	39	-5	-11	+18	-8	-1	-1	-10	+11
36	40	-14	-14	-4	+6	+2	-8	+10	-12
37	43	-7	-16	+3	-14	-7	+9	-8	+11
38	45	+25	+5	+21	-5	-7	+6	+6	0
39	46	+1	-11	+19	+5	+10	+2	0	+2
40	48	+11	-9	+1	+20	-5	+19	-12	+16
41	50	+3	-24	+27	+24	-7	-7	-7	+2
42	52	+10	+4	-1	+21	+12	-4	-6	+18
43	54	-5	+8	+8	-4	+26	-4	-13	+21
44	63	-7	+20	+5	+3	+15	-21	+5	-2
45	67	+3	+29	-2	-19	-11	-11	+1	-13
46	69	-22	+9	+18	-23	+16	+18	+18	-18
47	70	+3	-28	-10	+2	+2	-5	+11	+4
48	75	-18	-16	-27	+11	-9	-19	+11	-4
49	75	+12	+14	-36	+66	-16	-5	+5	+13
50	78	+15	+24	-2	+15	-8	+18	-1	+4
51	85	+17	+16	-20	-17	-7	+14	-4	-16
52	95	+4	-2	+40	+17	-16	+22	-19	-17
53			+22					-10	
1	101	+10	+208	-5	+33	+20	+48	-8	
2	106	+65	+291	-19	+49	+6	+25	+17	
3	109	+28	+310	+3	-14	+41	+82	+3	
4	108	-15	+240	+68	+1	+39	+62	+10	
5	107	+32	+137	+1	+22	-15	+32	-26	
6	105	+46	+86	+13	-26	+74	+21	-28	
7	105	+37	+57	+4	0	+63	+42	+9	
8	103	+73	+59	-29	+43	+44	+18	-23	
9	100	+121	+3	-23	+92	+44	+21	+20	
10	95	+129	+2	+4	+109	+20	-36	+3	
11	97	+104	+16	-17	+100	-12	-16	-9	
12	92	+148	+15	+32	+75	-10	-13	+3	
13	91	+134	+37	+15	+40	+9	+26	+21	
14	91	+76	+15	-21	+22	-13	+14	+1	
15	90	+75	+14	+2	-9	-12	+3	-6	
16	83	+76	-5	+20	+29	+2	+10	-4	
17	77	+69	+40	+21	0	+13	-17	+9	
18	72	+73	+11	-4	+19	+17	-19	+15	
19	67	+38	-22	-13	+21	+4	-13	-4	
20	61	+18	-24	+6	+4	-16	+15	-5	
21	57	-7	+4	-9	+14	+17	-1	0	
22	53	-5	-5	-6	-13	-7	-5	+5	
23	49	+2	-12	-4	+6	+9	0	+2	
24	46	-14	-5	-6	-25	-2	-2	-13	
25	47	-25	-6	-9	+8	-9	-5	-6	
26	46	-7	-7	-4	-21	-13	+8	0	
27	44	-6	-13	-7	-6	+4	+19	+9	
28	47	+23	0	-12	0	-15	0	+10	
29	50	-11	-17	-5	+12	-20	-17	-22	
30	48	-12	-4	-1	+7	0	+12	+6	
31	47	-4	+2	-17	-5	+13	+5	+11	

Quarterly factors for adjustment of smoothed mean to obtain annual norms

3d quarter (27th-30th week)	1.061	1.099	1.178	1.006	0.872	1.102	1.036	1.001
4th quarter (40th-52d week)	1.493	1.520	1.275	1.458	.988	1.098	.859	1.106
1st quarter (1st-13th week)	1.576	1.447	1.330	.946	1.129	1.042	.846	
2d quarter (14th-26th week)	1.801	1.341	1.080	1.171	1.069	.950	.881	

TABLE F.—Excess weekly death rates (annual basis) per 100,000 from influenza and pneumonia, 1935-42

SOUTH ATLANTIC

Week of year	Smoothed mean 1939-42	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43
32	49	-4	-12	-2	0	+4	-10	+16	-11
33	48	+9	-18	-13	+5	+18	-10	+3	-4
34	46	-16	-13	+15	+13	-18	+9	-10	+3
35	46	-4	+13	-19	-2	-3	-8	+6	+9
36	44	-10	+2	+6	+3	+4	-2	-3	-11
37	48	-11	-12	-16	+19	+21	+5	+2	-11
38	50	+1	+12	-7	-14	-10	-20	-6	-10
39	53	+16	-20	+1	-13	+12	+6	+2	-14
40	53	+10	+3	-12	-2	-7	+12	+6	+24
41	60	+20	-12	-7	+7	-16	+19	-3	+6
42	62	-4	+28	+51	+10	+2	-9	-5	+1
43	65	+16	+22	+10	+28	+13	+13	-8	+8
44	69	+20	+7	-1	+6	+7	-10	+1	-9
45	76	-13	-25	-13	+3	+2	-8	+11	-5
46	80	-33	-33	-14	-19	-15	+2	+5	0
47	84	-24	-18	-9	-6	+9	-9	+21	-28
48	87	-17	-13	+4	-3	-17	+7	+31	-31
49	92	+20	+14	+20	+12	+12	-24	-3	-12
50	95	+15	+104	+38	-31	0	+4	-13	+8
51	106	+22	-19	+32	+5	+23	-25	-12	+10
52	117	+11	+35	+57	+42	+9	-5	-32	+45
53			+65					-17	
1	129	+26	+57	+11	+19	+9	+15	+20	
2	136	+64	+57	-24	+5	+33	+2	-9	
3	147	-8	+23	-25	-32	+24	+20	-8	
4	149	-11	+57	-17	-18	+7	+57	-25	
5	151	-37	+71	+36	-5	+126	+102	+5	
6	149	+37	+80	+27	-8	+89	+15	-3	
7	149	+38	+142	-22	+21	+62	+25	-12	
8	148	+100	+105	-5	+55	+19	-24	-18	
9	145	+158	+58	-29	+21	-13	+9	-11	
10	144	+93	+43	-14	+10	-25	+65	+42	
11	141	+80	+14	-40	-35	-21	-24	+29	
12	136	+36	-5	-27	+10	+1	-8	+25	
13	132	+13	+36	-27	+12	+5	+7	-16	
14	121	+31	-8	-41	-2	+4	-9	-20	
15	112	+27	+17	-9	-35	+4	+43	+12	
16	99	-8	-1	+15	+9	-23	-7	-11	
17	90	+20	-7	+17	+5	+7	+12	+6	
18	77	+37	-21	+24	-1	-9	-20	-3	
19	72	+40	+16	+13	+34	0	-24	+6	
20	64	+22	+18	+4	-13	+7	+4	+4	
21	61	+3	+20	+9	+29	-3	+6	+3	
22	56	-21	+22	-6	-11	-9	+12	-6	
23	53	-4	+6	-1	+5	+4	+9	-4	
24	51	-10	-11	-13	-15	-3	-23	-5	
25	49	+10	-21	-10	-15	+20	-6	-2	
26	46	+2	-15	+3	-6	+8	+18	-7	
27	49	-32	-9	-2	-13	-15	-3	+9	
28	48	+5	+12	-8	+4	-10	-7	+4	
29	49	+18	-5	-17	+9	+13	+2	+41	
30	50	-10	-18	-17	-11	+15	-18	+8	
31	52	-31	+3	+13	-17	+23	+4	-10	

Quarterly factors for adjustment of smoothed mean to obtain annual norms

2d quarter (27th-39th week)	1.172	1.364	1.479	1.209	1.118	0.929	0.882	1.030
4th quarter (40th-52d week)	1.648	1.896	1.963	1.362	1.183	0.870	.869	1.210
1st quarter (1st-13th week)	1.679	1.679	1.306	1.138	1.065	1.044	.883	
3d quarter (14th-26th week)	2.097	1.665	1.299	1.068	1.050	1.050	.818	

TABLE G.—Excess weekly death rates (annual basis) per 100,000 from influenza and pneumonia, 1935-42

EAST SOUTH CENTRAL

Week of year	Smoothed mean 1939-42	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43
32	46	+7	-22	-21	-44	-13	+18	+15	-24
33	48	+16	+45	+7	-7	+5	-15	+7	+3
34	46	-26	+53	+13	-7	-39	+32	-10	-7
35	45	-20	+1	+20	+8	0	-11	+41	+12
36	45	+10	-27	-35	-27	+6	+3	-9	0
37	50	-5	-28	-30	+18	0	-14	0	+7
38	51	-60	-30	-13	+48	+4	-8	-1	+17
39	49	-3	+6	-12	-16	+38	+7	+1	-16
40	48	+15	-34	+20	+30	+6	+2	+32	+3
41	55	+43	+22	-18	-27	-35	-10	-17	+19
42	55	+46	+54	+33	+37	-23	+11	-29	+13
43	56	+41	+45	+36	+61	+47	+17	+20	-17
44	68	-15	-14	+43	+28	-20	+8	+4	-12
45	91	-31	+61	-42	+43	-16	-23	-28	-36
46	92	-93	-2	-28	+6	-39	+35	+8	+34
47	102	-40	+3	-28	-18	+74	+20	+74	+12
48	113	-30	-54	-64	-64	+2	-10	-53	-17
49	114	+45	-35	+9	-29	+33	-18	-17	+11
50	103	+106	+17	+61	+57	+47	-29	+43	-1
51	117	+107	+3	+69	+9	-8	-36	-6	-15
52	130	+188	-31	-2	-12	-44	-10	-30	+6
53			+65					-4	
1	144	+159	+159	+149	+19	-9	+127	-8	
2	157	+136	-39	-104	+1	+40	+176	-19	
3	175	+118	+13	-81	-9	+19	+89	-4	
4	175	-46	-19	-20	-42	-20	+205	-46	
5	178	-39	+97	+25	-20	+80	+163	+5	
6	179	+44	+190	+67	-27	+73	+30	-96	
7	182	-10	+319	+33	-82	+134	+13	+9	
8	181	+182	+409	-93	+30	+52	+8	+16	
9	178	+163	+236	-34	+7	+3	-1	-12	
10	171	+211	+177	+51	+48	+25	-31	+36	
11	153	+245	+95	-21	+94	-25	-45	+38	
12	144	+286	+140	+39	+111	+18	-29	+40	
13	132	+419	+202	-16	+85	-72	-49	+32	
14	121	+292	+92	-38	+103	0	+36	-12	
15	108	+116	+78	-21	+26	-5	-8	+58	
16	107	+64	+36	-18	+1	-11	-19	-31	
17	93	+83	+52	+33	+36	+12	-6	-13	
18	81	+120	+19	+23	+17	-18	+55	+21	
19	78	+88	+9	+2	-32	+5	-54	-6	
20	73	+2	-3	-4	-32	-8	-11	-8	
21	63	-7	-21	+13	+24	-3	+35	-7	
22	65	-40	+52	+17	-30	+3	+15	-21	
23	67	-34	-27	-39	-18	-31	-12	+6	
24	61	-12	-33	-6	-44	+15	-12	+16	
25	66	+20	-22	-7	+13	+54	-8	+7	
26	54	-13	-16	-5	-4	+5	-12	-27	
27	55	-45	-40	+19	-11	-46	+6	-5	
28	49	-44	+31	+20	-4	0	-26	+12	
29	51	+16	-22	-2	-12	+24	-8	+45	
30	53	+22	-2	-32	+19	+4	-10	-18	
31	53	-22	+1	+7	-20	+4	-4	-7	

Quarterly factors for adjustment of smoothed mean to obtain annual norms

3d quarter (27th-30th week)	0.926	1.439	1.106	1.249	0.974	0.986	0.888	1.056
4th quarter (40th-52d week)	1.746	1.620	1.600	1.574	1.195	.807	.856	1.050
1st quarter (1st-13th week)	1.452	1.524	1.369	1.095	1.175	.948	.832	
2d quarter (14th-26th week)	2.183	1.867	1.138	1.075	1.180	.922	.844	

TABLE H.—*Excess weekly death rates (annual basis) per 100,000 from influenza and pneumonia, 1935-42*

WEST SOUTH CENTRAL

Week of year	Smoothed mean 1939-42	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43
22	79	-21	+3	-4	-9	-1	-11	-16	-9
23	78	-15	-30	-31	-31	+13	-28	-19	+23
24	71	-5	+16	-13	+15	+8	+7	+4	+2
25	72	-21	+12	0	+69	-17	+9	+15	+11
26	73	-4	+2	+8	+14	-29	-20	+15	-25
27	71	-30	-5	+8	+7	+9	+3	-8	-2
28	74	-35	-11	-21	+17	-22	+13	+5	-33
29	78	-6	0	-7	+15	-13	-12	+1	+28
30	75	-5	-28	-23	-23	+31	-4	+13	-45
31	79	+11	-25	+14	+8	-21	+33	-6	+5
32	81	-6	-20	-30	-25	-12	-40	-4	+28
33	78	-13	+61	-16	-21	-12	+65	-7	-12
34	86	-24	+27	-32	-16	-2	-21	-7	+8
35	99	-8	+29	-22	-7	+7	-41	-37	-52
36	102	-36	-4	-25	-14	+29	+17	+20	+23
37	109	-67	+19	+1	-24	-5	+1	+48	+2
38	117	+15	+13	+9	+37	-29	-10	+21	+13
39	123	+54	+46	+82	+44	-34	-19	+14	+22
40	130	+42	+76	+89	-21	-2	-28	-12	-7
41	143	+34	-22	+10	+27	0	+31	+2	-26
42	154	+4	-75	+44	+1	+4	+79	-6	+26
43			-16					-36	
1	163	-2	+10	-13	+54	-5	+162	+32	
2	164	+24	-11	+62	-24	+8	+140	-8	
3	165	+26	+33	0	-49	0	+117	-25	
4	164	-53	+96	+52	-29	+52	+109	-33	
5	163	+42	+142	+47	-1	+107	+49	-3	
6	163	+4	+289	+1	-14	+183	-11	+13	
7	168	-11	+328	-27	+5	+164	+11	-35	
8	168	+137	+230	-9	-19	+98	-10	-18	
9	165	+79	+138	-32	+10	+50	+5	+48	
10	162	+169	+18	-45	+37	+24	-29	+26	
11	158	+59	+1	+30	+46	+27	+11	-35	
12	145	+126	+14	-53	-8	+17	-3	-13	
13	131	+235	+45	-16	+89	+17	+16	-8	
14	123	+147	+17	-17	+23	-10	+39	-37	
15	112	+141	+53	-27	-16	-27	-8	-14	
16	102	+183	+85	+33	-17	+35	+10	0	
17	100	+105	-9	-17	+11	-10	-27	+13	
18	97	+120	-35	-25	+3	-25	0	+1	
19	92	+8	+40	-5	-14	+21	+17	+10	
20	89	-17	-49	+7	-11	+14	-19	-11	
21	83	+4	+20	-7	+2	+18	-9	+25	
22	77	-33	-5	+29	-55	+14	-27	+3	
23	76	-12	-25	-16	-15	-14	+10	-34	
24	70	+14	-12	-8	+8	+9	0	+11	
25	70	-13	-11	+6	+24	-2	+9	+14	
26	70	+30	+33	-5	+8	-20	-5	+12	
27	69	-19	-23	-5	+3	+4	+2	+1	
28	70	-18	-43	-7	+59	-26	-5	+19	
29	77	-53	-25	-36	+8	+3	-18	+2	
30	77	-41	+4	-16	-14	+7	+8	-2	
31	78	-21	+7	+4	-3	+20	+28	+17	

Quarterly factors for adjustment of smoothed mean to obtain annual norms

3d quarter (27th-39th week)	1.169	1.261	1.053	1.455	1.121	0.906	1.010	0.976
4th quarter (40th-52d week)	1.486	1.735	1.573	1.355	1.074	.927	.985	.842
1st quarter (1st-13th week)	1.661	1.563	1.414	1.449	1.256	.943	.803	
2d quarter (14th-26th week)	2.188	1.713	1.252	1.152	1.135	.931	.849	

TABLE I.—*Excess weekly death rates (annual basis) per 100,000 from influenza and pneumonia, 1935-42*

MOUNTAIN									
Week of year	Smoothed mean 1939-42	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43
32	54	+23	+22	-2	+47	-14	+3	+33	+1
33	53	-12	-9	+65	+16	+29	-12	-7	-5
34	55	-41	-20	-29	+6	-5	+26	-1	-14
35	57	+24	+19	+11	+11	+34	-35	-11	-2
36	57	+15	+2	-13	-38	-6	+6	-18	-26
37	61	-68	+13	-35	-18	+23	+17	-5	+31
38	66	+35	-30	+9	-16	-7	-31	-2	-11
39	74	-20	-41	-10	-50	-14	-22	+56	-18
40	78	-18	-48	-65	+3	+15	+18	-29	+33
41	87	-15	-28	+33	-49	+3	-10	+13	+25
42	90	-38	-25	-37	-28	+22	-7	-6	-11
43	92	+38	+13	-30	+11	-5	+22	-8	+11
44	99	-37	-6	-37	-30	-18	+13	-5	-20
45	98	-39	-50	+14	-56	-51	-5	+28	+3
46	101	+59	+65	+80	+50	+63	-2	-7	-24
47	107	-15	+20	+9	-12	-45	+25	-28	-22
48	107	-44	+2	-45	+2	-30	+28	-3	+46
49	110	+66	+47	-45	-31	-12	+35	+27	+48
50	119	+65	-18	+74	+46	-57	-29	-12	+15
51	122	-54	+85	-20	+37	+35	-6	+26	-61
52	123	-3	+92	-42	-17	+23	+102	+10	-29
53			+308					-8	
1	128	+90	+575	-48	+11	+53	+195	-23	
2	133	+51	+685	+7	0	+85	+218	-15	
3	126	-19	+735	-21	+13	-33	+113	-17	
4	122	+43	+454	-2	+6	+42	+56	+47	
5	116	-10	+261	-29	-37	-27	+130	-39	
6	119	-55	+203	+2	+19	-10	-68	+23	
7	111	-35	+106	+88	-12	-2	-47	+6	
8	110	-31	+43	+66	+1	+50	-12	+28	
9	112	-59	-17	-4	+100	+8	-5	+7	
10	112	+43	+36	+5	-38	+35	-36	-44	
11	106	+56	-79	+59	+41	+36	+20	-25	
12	102	-22	+4	+15	+7	+17	+8	-41	
13	95	-41	+51	-30	+37	-14	+7	+24	
14	86	-22	-60	-5	+36	+31	-8	+18	
15	83	+52	+13	0	-16	-46	-54	+31	
16	76	+101	0	+45	-4	-28	+18	-8	
17	76	+25	+2	+13	-10	+55	-13	-18	
18	79	-7	-2	+33	-46	-46	+33	-30	
19	78	-45	+11	-6	+57	+31	-5	+40	
20	74	-46	+9	-24	+7	-5	+40	-22	
21	71	+39	-30	-16	-30	-10	-24	+7	
22	65	-49	+28	-3	-29	-19	-20	+39	
23	60	-11	-32	+33	-5	-46	+25	-1	
24	61	-53	-18	+16	-6	+42	-18	+6	
25	58	-2	+20	-18	+24	-19	-7	+11	
26	57	+61	+12	-22	+1	+39	+1	+6	
27	54	+43	-26	+26	-36	-31	-5	+26	
28	55	-58	-2	-6	-11	+9	-6	-22	
29	49	-29	+31	-21	+13	+24	-2	+10	
30	51	-22	+27	-22	-21	+30	-4	-7	
31	53	+38	-1	+12	+2	-13	-14	0	

Quarterly factors for adjustment of smoothed mean to obtain annual norms

3d quarter (27th-39th week)	1.188	1.278	1.459	1.105	1.004	0.997	0.900	0.856
4th quarter (40th-52d week)	1.462	1.469	1.296	1.163	.928	1.234	.871	.956
1st quarter (1st-13th week)	2.003	1.627	1.760	1.598	1.274	.935	.816	
2d quarter (14th-26th week)	1.889	1.358	1.677	1.260	1.060	.781	1.173	

TABLE J.—*Excess weekly death rates (annual basis) per 100,000 from influenza and pneumonia, 1935-42*

PACIFIC

Week of year	Smoothed mean 1939-42	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43
32	27	-2	-9	+10	+19	-15	+9	-2	-9
33	26	+18	+2	+7	-6	-2	0	+4	-5
34	26	-3	+8	+4	-7	+5	+6	-7	-2
35	28	+9	-17	+14	-4	+7	-1	-7	-6
36	28	0	+6	+4	+2	-8	-2	+4	-11
37	32	-6	-12	-11	-20	+1	-2	+3	-2
38	32	-19	-6	+11	-8	-3	-4	-6	-14
39	33	-6	-10	-13	-1	+34	+3	+8	-1
40	34	-4	+1	-12	-9	-8	-2	-8	-2
41	36	-16	-25	+2	+7	-22	-4	+4	+6
42	34	-14	+3	+16	-20	+14	+7	-5	+15
43	36	-12	-1	-20	+12	+5	-2	+11	-4
44	37	+5	-27	-16	-5	+4	-5	-2	+6
45	36	+14	+2	+23	-20	+7	+7	-9	+1
46	36	-1	+3	+2	-2	+6	-9	+4	+11
47	39	+23	+17	-26	-4	-3	-6	-3	+2
48	42	+45	+3	+6	+30	-10	+5	-1	+8
49	45	+23	+22	+2	+32	+13	+43	-10	-5
50	49	-5	+30	+24	+12	5	+45	+11	+3
51	54	-23	+24	+11	+10	-6	+85	-7	-16
52	57	-14	+1	+22	-6	-2	+106	-4	-6
53			-10					-18	
1	59	+49	+60	0	+41	+12	+93	+2	
2	63	-1	+53	-7	-7	-5	+46	+9	
3	65	+42	+189	+6	-4	-9	+32	+2	
4	67	-35	+378	+30	-22	+14	-3	-6	
5	66	-34	+284	-24	-16	+7	-3	-9	
6	66	-4	+335	+18	-23	+14	-2	+9	
7	65	+17	+172	+6	-36	-4	-6	-6	
8	65	+36	+88	-7	-2	+16	-4	-19	
9	60	+50	+11	-18	+29	-13	+17	0	
10	61	+67	+3	-2	-4	+4	-3	+7	
11	58	+59	-2	-3	+16	-23	-7	+8	
12	55	+5	+12	-22	+27	+10	-3	+16	
13	53	-28	-5	-4	+14	+4	-7	-3	
14	52	+14	-12	0	-12	-14	+10	-10	
15	49	+8	-1	+10	-4	0	-6	+16	
16	46	-8	+24	+26	+32	-13	-2	+12	
17	45	+19	-4	+5	-3	+1	+2	+18	
18	42	+7	+4	-1	-17	+4	-10	-25	
19	41	+11	+23	-19	-16	-3	+11	0	
20	36	-20	0	+6	-2	+5	+5	+7	
21	37	-6	-8	-9	+25	-3	-7	+6	
22	33	-9	-21	-6	+12	-2	-9	+1	
23	32	+6	+4	-14	-9	+1	+4	+7	
24	29	-4	+9	-4	-1	+3	-8	-7	
25	29	-7	+1	+8	-12	+3	+10	+5	
26	28	-7	-8	+17	-11	-6	-1	-8	
27	31	-2	0	-19	+8	-11	0	+3	
28	31	0	-17	-10	-8	-1	-1	+8	
29	31	-7	-28	-1	-10	+26	+2	0	
30	30	+1	-12	+13	+1	-8	+11	+3	
31	29	-1	-2	+4	-9	-11	-6	+7	

Quarterly factors for adjustment of smoothed mean to obtain annual norms

3d quarter (27th-39th week)	1.556	1.615	1.500	1.240	1.174	0.909	0.894	1.061
4th quarter (40th-52d week)	2.038	2.235	1.766	1.698	1.066	.917	.929	1.392
1st quarter (1st-13th week)	2.110	2.033	1.539	1.565	1.080	.749	1.170	
2d quarter (14th-26th week)	1.930	1.928	1.576	1.275	.816	.798	1.311	

Influenza and pneumonia deaths from the following 90 cities were used in computing rates for each of the nine geographic sections; the enumerated census population of 1940 is shown for each city:

NEW ENGLAND: Barre 10,909, Boston 770,816, Bridgeport 147,121, Concord 27,171, Fall River 115,428, Hartford 166,267, New Haven 160,605, Portland 73,643, Providence 253,504, Springfield 149,554, Worcester 193,694.

MIDDLE ATLANTIC: Buffalo 575,901, Camden 117,536, Newark 429,760, New York 7,454,995, Philadelphia 1,931,334, Pittsburgh 671,659, Reading 110,568, Rochester 324,975, Syracuse 205,967, Trenton 124,697.

EAST NORTH CENTRAL: Chicago 3,396,808, Cincinnati 455,610, Cleveland 878,336, Columbus 306,087, Detroit 1,623,452, Flint 151,543, Fort Wayne 118,410, Grand Rapids 164,292, Indianapolis 386,972, Kenosha 48,765, Milwaukee 587,472, Racine 67,195, Springfield 75,503, South Bend 101,268, Superior 35,136, Terre Haute 62,693.

WEST NORTH CENTRAL: Duluth 101,065, Fargo 32,580, Kansas City 399,178, Minneapolis 492,370, Omaha 223,944, St. Joseph 75,711, St. Louis 816,048, St. Paul 287,736, Topeka 67,833, Wichita 114,066.

SOUTH ATLANTIC: Atlanta 302,288, Baltimore 859,100, Brunswick 15,035, Charleston, S. C. 71, 275, Charleston, W. Va. 67,914, Cumberland 39,483, Frederick 15,802, Lynchburg 44,541, Raleigh 46,897, Richmond 193,042, Roanoke 69,287, Savannah 95,996, Tampa 108,391, Washington, D. C. 663,091, Wheeling 61,099, Wilmington, Del. 112,504, Wilmington, N. C. 33,407, Winston-Salem 79,815.

EAST SOUTH CENTRAL: Birmingham 267,583, Memphis 292,942, Mobile 78,720, Nashville 167,402.

WEST SOUTH CENTRAL: Dallas 294,734, Galveston 60,862, Houston 384,514, Little Rock 88,039, New Orleans 494,537, San Antonio 253,854, Shreveport 98,167.

MOUNTAIN: Billings 23,261, Boise 26,130, Denver 322,142, Great Falls 29,928, Helena 15,056, Missoula 18,449, Pueblo 52,162, Salt Lake City 149,934.

PACIFIC: Los Angeles 1,504,277, Sacramento 105,968, San Francisco 634,536, Seattle 368,302, Spokane 122,001, Tacoma 109,408.

PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

May 23–June 19, 1943

The accompanying table summarizes the prevalence of nine important communicable diseases, based on weekly telegraphic reports from State health departments. The reports from each State are published in the Public Health Reports under the section "Prevalence of disease." The table gives the number of cases of these diseases for the 4-week period ended June 19, 1943, the number reported for the corresponding period in 1942, and the median number for the years 1938–42.

DISEASES ABOVE MEDIAN PREVALENCE

Meningococcus meningitis.—The number of cases of meningococcus meningitis dropped from 2,221 for the preceding 4-week period to 1,597 for the 4 weeks ended June 19. There were 288 cases reported for this period in 1942 and the 1938–42 median was 152 cases, the current incidence being more than 10 times that figure. While a decline in the number of cases was apparent in practically all sections of the country during the current period, the numbers of cases in all sections were relatively high. In the New England region the number of cases (161) was about 10 times the median; in the East North Central and Pacific regions the numbers (237 and 145, respectively) were more than 12 times the median; in the West North Central the number (95) was almost 14 times the median, while in the Mountain region the number of cases (68) was 19 times the median. Smaller increases were reported from the other regions. Since the lowest level of this disease is usually reached during the late summer, a further decline may be expected, but the relatively high level that has been maintained since the beginning of the current outbreak in December 1942 will probably continue throughout the remainder of

the year. While the number of cases has fluctuated considerably from week to week, the peak of the current outbreak was, as in most preceding years, reached during the month of April.

For the country as a whole 11,446 cases have been reported since the beginning of the current year, which is a larger number than has been reported for the 12 months of any year in the 15 years for which these data are available. Incomplete morbidity reports and mortality reports from the Bureau of the Census prior to 1929 indicate that the current incidence is probably higher than in any prior year of record.

Number of cases of 9 communicable diseases in the United States during the 4-week period May 23-June 19, 1943, the number for the corresponding period in 1942, and the median number of cases for the corresponding period, 1938-42

Division	Current period	1942	5-year median	Current period	1942	5-year median	Current period	1942	5-year median
	Diphtheria			Influenza ¹			Measles ²		
United States.....	703	612	777	3,636	2,809	2,809	88,677	62,904	62,904
New England.....	12	20	20	11	14	10	8,822	6,994	6,994
Middle Atlantic.....	94	87	144	45	27	29	26,995	9,869	10,115
East North Central.....	165	131	153	180	226	226	31,697	8,748	8,748
West North Central.....	46	38	60	74	34	43	5,904	5,225	4,496
South Atlantic.....	108	95	140	958	895	972	4,621	4,283	6,366
East South Central.....	42	41	61	153	140	167	1,382	756	1,265
West South Central.....	109	106	106	1,532	864	864	1,427	2,380	2,637
Mountain.....	43	41	61	467	376	229	2,789	5,010	2,838
Pacific.....	84	53	81	216	213	239	5,040	19,639	8,860
	Meningococcus meningitis			Pollomyelitis			Scarlet fever		
United States.....	1,587	288	162	240	97	105	10,123	7,503	10,066
New England.....	161	29	10	7	6	2	2,061	974	905
Middle Atlantic.....	494	103	64	11	13	10	2,480	2,098	3,634
East North Central.....	237	11	19	6	9	9	2,588	2,241	3,799
West North Central.....	95	17	7	5	11	4	669	700	747
South Atlantic.....	274	56	25	10	15	15	504	438	518
East South Central.....	67	22	15	4	11	10	170	244	244
West South Central.....	56	20	14	62	16	10	175	169	171
Mountain.....	68	5	4	13	6	6	745	192	197
Pacific.....	145	25	12	122	10	24	731	447	589
	Smallpox			Typhoid and paratyphoid fever			Whooping cough ³		
United States.....	46	105	243	374	457	572	16,324	15,027	15,027
New England.....	0	0	0	24	13	20	963	1,750	1,359
Middle Atlantic.....	1	0	0	56	62	71	2,449	4,015	3,502
East North Central.....	17	48	79	35	42	69	3,106	3,502	3,494
West North Central.....	5	9	90	22	29	31	1,089	475	655
South Atlantic.....	5	4	4	106	128	128	3,289	1,808	2,160
East South Central.....	8	8	23	32	42	69	618	771	771
West South Central.....	10	25	26	72	116	125	2,541	817	1,581
Mountain.....	2	7	17	11	8	25	578	495	839
Pacific.....	3	4	6	16	17	45	1,691	1,394	2,087

¹ Mississippi, New York, and Pennsylvania excluded; New York City included.

² Mississippi excluded.

Influenza.—The 3,636 cases of influenza reported for the current period was about 30 percent above the 1942 incidence for the corresponding period. The 5-year median was represented by the 1942

figure (2,809 cases). Approximately three-fourths of the total cases were reported from five rather widely separated States, viz., Texas 1,447 cases, South Carolina 578, Virginia 266, Colorado 193, and Arizona 173 cases.

Measles.—For the 4 weeks ended June 19 there were 88,677 cases of measles reported, approximately 26,000 more than the normal seasonal expectancy. With the exception of the year 1941, when approximately 111,000 cases were reported for this period, the current incidence is the highest since 1935 when 91,250 cases were reported for the same weeks. Six of the geographic regions reported increases over the 1938–42 medians, the increases ranging from about 10 percent in the East South Central region to about 3.6 times the median in the East North Central region.

Poliomyelitis.—The number of cases of poliomyelitis rose from 118 during the preceding 4 weeks to 240 during the 4 weeks ended June 19. An increase of this disease is expected at this season of the year, but the current rise is somewhat sharper than normally occurs. However, the increase appears to be largely due to an excess of cases in two States, California (116 cases) and Texas (51) cases. In the New England and Mountain regions, the numbers of cases were small but they represented considerable increases over the median. In other regions the cases either closely approximated the median or fell considerably below it.

Scarlet fever.—The incidence of scarlet fever was about normal for this season of the year, the number (10,123) being only slightly above the 1938–42 median. The number of cases in the New England region was more than 2 times the preceding 5-year median and in the Pacific region the number (745 cases) was almost 4 times the median. A minor increase was reported in the Pacific region, but all other regions reported a decline in the incidence.

Whooping cough.—For the country as a whole this disease was slightly above the normal seasonal expectancy. The West North Central and South Atlantic regions reported excesses over the 1938–42 median but in all other regions the incidence was relatively low.

DISEASES BELOW MEDIAN PREVALENCE

Diphtheria.—The number of cases (703) of diphtheria reported during the 4 weeks ended June 19 was about 15 percent above that for the corresponding period in 1942, but it was lower than the 1938–42 median. An excess of cases over the median was reported from the East North Central region, and in the West South Central region the incidence stood at about the normal seasonal level, but in all other regions the incidence was relatively low.

Smallpox.—For the current period there were 46 cases of smallpox reported, as compared with 105 in 1942 and a 5-year median of 243

cases. One case was reported from New Jersey, in the Middle Atlantic region, and in the South Atlantic region the incidence was about normal, but all other regions showed very significant declines from the 1938-42 medians.

Typhoid and paratyphoid fever.—The incidence of typhoid fever was also relatively low, the number of cases (374) being about 80 percent of the number reported for this period in 1942 and about 65 percent of the preceding 5-year median. With one exception, the New England region, the incidence was considerably below the normal seasonal level in all sections of the country.

MORTALITY, ALL CAUSES

For the 4 weeks ended June 19 there were approximately 35,500 deaths from all causes reported to the Bureau of the Census by the group of large cities. The number of deaths reported is 11.1 percent more than the average for the corresponding weeks of the 3 preceding years. Rates for the cities will be published by the Bureau of the Census when current population estimates become available. With the excessive internal migration that has taken place since 1940, no accurate population estimates can be made, so it is uncertain as to how much of the current increase is due to increased population and how much of it represents an increased death rate.

DEATHS DURING WEEK ENDED JUNE 26, 1943

[From the Weekly Mortality Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended June 26, 1943	Correspond- ing week 1942
Data from 88 large cities of the United States:		
Total deaths	8,918	7,728
Average for 3 prior years	7,928	
Total deaths, first 25 weeks of year	239,607	216,873
Deaths under 1 year of age	695	497
Average for 3 prior years	503	
Deaths under 1 year of age, first 25 weeks of year	16,395	13,831
Data from industrial insurance companies:		
Policies in force	65,572,219	64,967,453
Number of death claims	12,341	10,607
Death claims per 1,000 policies in force, annual rate	9.8	8.5
Death claims per 1,000 policies, first 25 weeks of year, annual rate	10.4	9.7

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED JULY 3, 1943

Summary

The number of reported cases of poliomyelitis increased from 136 for the preceding week to 190. This increase is accounted for entirely by the increase in 2 States—Texas, from 39 to 80 cases, and Oklahoma, from 8 to 23, or an increase of 56 cases in these 2 States. California reported 57 cases as compared with 58 for the preceding week, and Arizona reported only 3 cases as compared with 6 for the preceding week. For the country as a whole, a total of 1,084 cases has been reported to date, as compared with 609 for the same period in 1942 and a 5-year median of 708 for the period. The total number of cases reported to date this year is above that for any prior year since 1934 (2,099 cases).

The number of cases of meningococcus meningitis reported declined from 335 to 245. For the corresponding week last year, 52 cases were reported. The 5-year (1938–42) median for the week is 36.

For the first half of the current year, the incidence of the following-named diseases is above that for last year: The dysenteries (about 50 percent higher), infectious encephalitis, measles, meningococcus meningitis, poliomyelitis, scarlet fever, smallpox (only slightly higher), endemic typhus fever, and whooping cough. The incidence of anthrax, diphtheria, influenza, Rocky Mountain spotted fever, tularemia, and typhoid fever is below that for last year.

A total of 9,259 deaths was reported for the current week in 89 large cities in the United States as compared with 8,950 last week and a 3-year (1940–42) average of 7,507. For the first half year, 249,541 deaths have been reported in these cities as compared with 225,194 for the corresponding period last year.

Telegraphic morbidity reports from State health officers for the week ended July 3, 1943, and comparison with corresponding week of 1942 and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none were reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median 1938-42	Week ended—		Median 1938-42	Week ended—		Median 1938-42	Week ended—		Median 1938-42
	July 3, 1943	July 4, 1942		July 3, 1943	July 4, 1942		July 3, 1943	July 4, 1942		July 3, 1943	July 4, 1942	
NEW ENGLAND												
Maine.....	0	0	0	-----	-----	111	95	82	3	1	0	
New Hampshire.....	0	0	0	2	-----	6	27	13	0	0	0	
Vermont.....	0	0	0	-----	-----	148	55	56	1	0	0	
Massachusetts.....	0	0	1	-----	-----	738	444	504	14	1	0	
Rhode Island.....	0	0	0	-----	-----	140	53	53	3	0	0	
Connecticut.....	1	0	0	-----	-----	190	141	141	5	2	0	
MIDDLE ATLANTIC												
New York.....	7	14	14	13	13	1,912	611	869	51	9	5	
New Jersey.....	3	2	4	1	5	1,310	305	305	16	2	1	
Pennsylvania.....	20	7	7	3	-----	390	230	260	14	3	3	
EAST NORTH CENTRAL												
Ohio.....	10	7	7	2	1	4	327	90	90	4	1	1
Indiana.....	1	4	5	9	4	4	109	37	37	1	0	0
Illinois.....	11	19	19	11	3	7	602	70	132	10	0	0
Michigan ¹	6	3	5	1	-----	-----	1,158	237	692	17	1	1
Wisconsin.....	1	1	1	9	12	12	1,245	789	793	1	0	1
WEST NORTH CENTRAL												
Minnesota.....	1	4	4	2	-----	-----	266	66	66	3	1	6
Iowa.....	0	1	1	-----	-----	2	125	51	64	0	0	0
Missouri.....	0	1	1	1	-----	-----	71	31	18	6	1	1
North Dakota.....	0	0	1	-----	1	-----	52	9	9	6	0	0
South Dakota.....	1	0	0	-----	2	-----	47	2	2	0	0	0
Nebraska.....	0	1	1	2	2	-----	22	32	13	1	1	0
Kansas.....	2	0	2	2	-----	-----	69	35	67	3	1	0
SOUTH ATLANTIC												
Delaware.....	0	0	0	-----	-----	-----	6	4	4	1	0	0
Maryland ¹	2	1	1	5	3	-----	120	65	47	5	2	1
Dist. of Col.....	9	0	1	-----	-----	-----	55	24	24	2	0	0
Virginia.....	4	3	5	70	42	14	61	59	126	15	2	3
West Virginia.....	0	2	4	-----	-----	-----	31	27	38	4	0	0
North Carolina.....	4	4	4	37	1	1	147	66	174	4	0	1
South Carolina.....	6	1	6	90	37	30	26	34	34	5	0	0
Georgia.....	4	5	4	2	3	3	63	25	21	4	1	0
Florida.....	2	1	2	8	-----	-----	11	22	22	3	2	0
EAST SOUTH CENTRAL												
Kentucky.....	0	5	3	1	1	5	20	14	71	0	3	3
Tennessee.....	2	2	3	1	5	5	35	35	32	4	0	0
Alabama.....	1	6	6	6	3	3	124	15	62	1	0	0
Mississippi ¹	1	2	3	-----	-----	-----	-----	-----	-----	0	0	0
WEST SOUTH CENTRAL												
Arkansas.....	0	4	2	-----	1	2	23	28	28	0	0	0
Louisiana.....	4	1	4	2	1	4	29	15	11	7	1	0
Oklahoma.....	1	0	2	6	11	9	9	39	35	1	0	0
Texas.....	15	11	11	314	135	113	156	99	127	8	6	1
MOUNTAIN												
Montana.....	0	4	0	6	-----	-----	96	35	35	0	1	0
Idaho.....	0	0	0	3	-----	-----	27	7	10	0	0	0
Wyoming.....	0	0	0	4	56	-----	25	22	6	0	0	0
Colorado.....	5	7	13	8	9	8	30	61	48	3	0	0
New Mexico.....	2	1	1	-----	1	1	7	11	18	1	0	0
Arizona.....	0	1	1	43	9	24	18	25	25	0	0	0
Utah ¹	0	0	0	3	1	-----	50	263	126	3	0	0
Nevada.....	1	0	-----	-----	-----	-----	15	23	-----	4	0	-----
PACIFIC												
Washington.....	7	4	0	-----	3	-----	133	729	61	2	0	0
Oregon.....	2	2	4	4	3	6	48	46	46	4	0	0
California.....	16	5	11	36	15	15	262	1,110	472	16	9	2
Total	143	136	186	695	370	406	10,765	6,333	6,419	245	52	36
26 weeks	6,126	6,314	7,772	77,581	78,126	149,475	509,829	450,664	450,664	12,011	2,019	1,211

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended July 3, 1943, and comparison with corresponding week of 1942 and 5-year median—Con.

Division and State	Pollomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
	Week ended—		Median 1938-42	Week ended—		Median 1938-42	Week ended—		Median 1938-42	Week ended—		Median 1938-42
	July 3, 1943	July 4, 1942		July 3, 1943	July 4, 1942		July 3, 1943	July 4, 1942		July 3, 1943	July 4, 1942	
NEW ENGLAND												
Maine.....	0	0	0	14	7	7	0	0	0	2	0	1
New Hampshire.....	0	0	0	2	2	0	0	0	0	0	0	0
Vermont.....	0	0	0	3	1	3	0	0	0	0	0	0
Massachusetts.....	0	1	0	169	124	124	0	0	0	1	4	2
Rhode Island.....	0	0	0	5	5	5	0	0	0	1	1	0
Connecticut.....	0	0	0	22	11	23	0	0	0	1	1	1
MIDDLE ATLANTIC												
New York.....	4	1	2	148	108	218	0	0	0	8	2	6
New Jersey.....	1	0	0	26	37	58	0	0	0	1	2	4
Pennsylvania.....	0	1	0	63	85	133	0	0	0	11	10	10
EAST NORTH CENTRAL												
Ohio.....	0	1	1	66	86	86	0	5	1	4	16	8
Indiana.....	0	1	0	9	14	21	3	0	0	4	0	2
Illinois.....	0	4	3	48	62	129	1	2	3	1	2	9
Michigan ¹	1	3	1	50	85	126	0	0	0	7	0	3
Wisconsin.....	0	0	0	82	60	60	0	0	2	0	0	0
WEST NORTH CENTRAL												
Minnesota.....	1	0	0	9	22	25	0	0	2	1	2	0
Iowa.....	0	0	0	4	10	15	0	0	8	2	0	0
Missouri.....	1	1	0	10	12	20	0	2	5	2	5	5
North Dakota.....	0	1	0	0	3	2	0	0	0	0	1	0
South Dakota.....	0	0	0	6	3	4	0	0	4	0	1	0
Nebraska.....	0	0	0	3	4	8	1	0	0	0	0	0
Kansas.....	3	0	0	17	18	19	1	0	0	3	1	2
SOUTH ATLANTIC												
Delaware.....	0	0	0	1	8	3	0	0	0	2	1	1
Maryland ¹	0	0	0	20	29	12	0	0	0	1	7	1
Dist. of Col.....	0	0	0	7	1	3	0	0	0	0	0	0
Virginia.....	0	1	1	13	10	7	0	0	0	7	4	5
West Virginia.....	0	0	0	6	7	13	0	0	0	6	1	3
North Carolina.....	1	0	1	2	6	12	0	0	0	6	4	6
South Carolina.....	0	2	2	0	6	2	0	0	0	3	7	7
Georgia.....	1	1	3	1	7	7	0	1	0	5	16	18
Florida.....	0	1	1	4	1	1	0	0	0	0	6	2
EAST SOUTH CENTRAL												
Kentucky.....	0	6	0	9	21	19	0	0	0	8	8	9
Tennessee.....	0	6	1	9	19	18	0	0	1	6	11	11
Alabama.....	0	1	1	4	7	7	1	0	0	4	2	4
Mississippi ¹	0	2	2	3	4	2	0	0	0	6	3	8
WEST SOUTH CENTRAL												
Arkansas.....	3	12	0	1	2	2	0	0	1	7	8	12
Louisiana.....	1	2	2	6	4	5	0	1	0	6	12	21
Oklahoma.....	23	0	0	4	4	9	0	0	3	1	1	10
Texas.....	80	1	3	28	15	18	0	2	2	17	13	21
MOUNTAIN												
Montana.....	0	0	0	6	8	6	1	0	0	0	0	0
Idaho.....	0	0	0	1	0	2	0	1	0	0	1	1
Wyoming.....	0	0	0	17	12	6	0	1	0	0	0	0
Colorado.....	5	0	0	42	1	15	0	0	0	0	0	1
New Mexico.....	0	0	1	3	1	6	6	0	0	1	7	7
Arizona.....	3	3	0	18	2	3	0	0	0	0	1	1
Utah ¹	2	0	0	17	5	5	0	0	0	1	0	0
Nevada.....	0	0	0	11	0	0	0	0	0	1	0	0
PACIFIC												
Washington.....	3	0	0	23	8	10	0	0	0	1	0	1
Oregon.....	0	0	0	4	4	6	0	0	0	0	1	2
California.....	57	2	7	110	61	75	0	0	0	3	4	6
Total	190	54	79	1,128	1,012	1,415	18	14	38	141	166	240
26 weeks	1,084	609	708	92,168	84,293	110,798	576	568	1,763	1,807	2,378	2,646

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended July 3, 1943, and comparison with corresponding week of 1942 and 5-year median—Con.

Division and State	Whooping cough			Week ended July 3, 1943								
	Week ended—		Median, 1938-42	Anthrax	Dysentery			Encephalitis, infectious	Leprosy	Rocky Mt. spotted fever	Tularemia	Typhus fever
	July 3, 1943	July 4, 1942			Amebic	Bacillary	Unspecified					
NEW ENGLAND												
Maine.....	19	21	25	0	0	0	0	0	0	0	0	0
New Hampshire.....	5	0	0	0	0	0	0	0	0	0	0	0
Vermont.....	0	38	26	0	0	0	0	0	0	0	0	0
Massachusetts.....	76	180	144	0	0	1	0	4	0	0	0	0
Rhode Island.....	46	43	13	0	0	0	0	0	0	0	0	13
Connecticut.....	23	58	58	0	1	30	0	0	0	0	0	0
MIDDLE ATLANTIC												
New York.....	319	379	379	0	14	7	0	3	0	1	0	0
New Jersey.....	204	246	161	1	0	0	0	1	0	0	0	0
Pennsylvania.....	287	237	315	0	0	0	0	2	0	1	1	0
EAST NORTH CENTRAL												
Ohio.....	252	177	236	0	1	0	0	0	0	1	0	0
Indiana.....	55	38	20	0	0	14	0	0	0	0	0	0
Illinois.....	165	334	245	0	0	0	0	1	0	0	2	0
Michigan ¹	179	122	208	0	0	2	0	0	0	0	0	0
Wisconsin.....	288	248	171	0	0	0	0	0	0	0	1	0
WEST NORTH CENTRAL												
Minnesota.....	74	34	34	0	1	0	0	0	0	0	0	0
Iowa.....	62	27	32	0	0	0	0	0	0	0	0	0
Missouri.....	42	11	30	0	0	0	0	0	0	0	0	0
North Dakota.....	6	0	10	0	0	0	0	0	0	0	0	0
South Dakota.....	7	0	6	0	0	0	9	0	0	0	1	0
Nebraska.....	7	7	9	0	0	0	0	0	0	0	0	0
Kansas.....	83	54	54	0	0	0	0	0	0	0	0	0
SOUTH ATLANTIC												
Delaware.....	4	1	5	0	0	0	0	0	0	0	0	0
Maryland ¹	163	55	57	0	0	0	0	0	0	3	0	0
Dist. of Col.....	36	22	9	0	1	0	0	0	0	0	0	0
Virginia.....	67	46	54	0	0	0	136	0	0	5	0	0
West Virginia.....	67	8	57	0	0	0	0	0	0	1	0	0
North Carolina.....	275	108	253	0	0	0	0	0	0	2	0	0
South Carolina.....	50	46	46	0	0	26	0	0	0	0	0	2
Georgia.....	17	45	28	0	1	13	0	0	0	0	1	27
Florida.....	38	4	7	0	3	0	3	0	0	0	0	9
EAST SOUTH CENTRAL												
Kentucky.....	69	46	46	0	1	13	0	0	0	0	0	0
Tennessee.....	58	71	71	0	0	6	0	0	0	0	1	0
Alabama.....	58	31	31	0	0	0	0	0	0	0	0	14
Mississippi ¹				0	0	0	0	0	0	0	1	2
WEST SOUTH CENTRAL												
Arkansas.....	28	19	19	0	2	61	0	0	0	0	0	0
Louisiana.....	10	0	14	0	0	38	0	0	1	0	1	7
Oklahoma.....	16	14	25	0	0	0	0	0	0	1	0	0
Texas.....	410	137	258	0	17	408	0	2	0	0	0	20
MOUNTAIN												
Montana.....	18	13	13	0	0	0	0	0	0	1	1	0
Idaho.....	4	3	6	0	0	0	0	0	0	0	0	0
Wyoming.....	4	7	5	0	0	0	0	0	0	2	2	0
Colorado.....	21	24	31	0	0	0	0	8	0	2	0	1
New Mexico.....	0	17	18	0	0	1	0	0	0	0	0	0
Arizona.....	19	23	23	0	0	0	19	0	0	0	0	0
Utah ¹	108	31	70	0	0	0	0	1	0	0	0	0
Nevada.....	6	4		0	0	0	0	0	0	0	0	0
PACIFIC												
Washington.....	50	62	62	0	0	0	0	0	0	0	0	0
Oregon.....	48	20	25	0	0	0	0	0	0	0	0	0
California.....	203	126	206	0	2	12	0	0	0	0	1	0
Total.....	4,046	3,237	3,749	1	44	628	164	14	1	25	13	82
26 weeks.....	106,015	98,514	101,777	35	961	6,344	1,716	288	14	185	478	1,286
26 weeks, 1942.....				42	513	3,201	1,863	224	32	203	501	1,007

¹ New York City only.

² Period ended earlier than Saturday.

WEEKLY REPORTS FROM CITIES

City reports for week ended June 19, 1943

This table lists the reports from 81 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

	Diphtheria cases	Etiophthalmis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Polymyositis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
NEW ENGLAND												
Maine:												
Portland	0	0	0	0	87	3	3	0	0	0	0	10
New Hampshire:												
Concord	0	0	0	0	0	1	0	0	1	0	0	0
Vermont:												
Barre	0	0	0	0	1	0	0	0	0	0	0	0
Massachusetts:												
Boston	1	0	0	0	189	12	15	0	119	0	0	24
Fall River	0	0	0	0	52	0	0	0	2	0	0	4
Springfield	0	0	0	0	15	0	1	0	18	0	0	0
Worcester	0	0	0	0	14	1	5	0	7	0	0	6
Rhode Island:												
Providence	0	0	1	0	112	3	0	1	11	0	0	19
Connecticut:												
Bridgeport	2	0	0	0	5	0	1	0	1	0	0	1
Hartford	1	0	0	0	10	1	4	0	2	0	0	0
New Haven	0	0	0	0	44	0	1	0	0	0	0	6
MIDDLE ATLANTIC												
New York:												
Buffalo	0	0	0	0	45	1	2	0	9	0	0	6
New York	5	1	1	1	1,217	39	42	0	149	0	5	70
Rochester	0	0	0	0	158	0	7	0	5	0	0	5
Syracuse	0	0	0	0	45	3	4	0	3	0	1	23
New Jersey:												
Camden	0	0	0	0	1	0	0	0	0	0	0	2
Newark	0	0	0	0	196	1	6	0	5	0	0	41
Trenton	1	0	0	0	3	1	1	0	6	0	0	1
Pennsylvania:												
Philadelphia	0	0	1	1	187	5	11	0	46	0	0	75
Pittsburgh	4	0	0	0	16	4	12	0	17	0	0	37
Reading	0	0	0	0	4	0	1	0	0	0	0	11
EAST NORTH CENTRAL												
Ohio:												
Cincinnati	1	0	1	1	33	2	1	0	13	0	1	7
Cleveland	2	0	2	0	9	6	9	0	11	0	0	47
Indiana:												
Fort Wayne	0	0	0	0	14	0	2	0	1	0	0	1
Indianapolis	0	0	0	0	29	0	8	0	4	0	0	9
South Bend	0	0	0	0	20	0	0	0	1	0	0	4
Terre Haute	0	0	0	0	0	0	2	0	0	0	0	0
Illinois:												
Chicago	11	0	1	1	325	7	22	0	40	0	1	51
Springfield	0	0	0	0	0	1	0	0	2	0	0	1
Michigan:												
Detroit	2	0	0	0	871	9	13	0	19	0	0	81
Flint	0	0	0	0	43	0	0	0	0	0	0	7
Grand Rapids	0	0	0	0	109	0	0	0	2	0	0	8
Wisconsin:												
Kenosha	0	0	0	0	1	0	0	0	3	0	0	1
Milwaukee	0	0	0	0	275	1	2	0	70	0	0	43
Racine	0	0	0	0	4	0	0	0	11	0	0	2
WEST NORTH CENTRAL												
Minnesota:												
Duluth	0	0	1	1	136	1	0	0	3	0	0	6
Minneapolis	0	0	0	0	19	2	6	0	1	0	0	10
St. Paul	0	0	0	0	30	0	5	0	1	0	0	48
Missouri:												
Kansas City	1	0	0	0	50	0	4	0	11	0	0	7
St. Joseph	0	0	0	0	0	0	0	0	0	0	0	0
St. Louis	0	0	1	0	62	5	11	0	6	0	0	23

City reports for week ended June 19, 1943—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Pollomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
WEST NORTH CENTRAL—continued												
Nebraska:												
Omaha.....	2	0	0	0	2	0	1	0	1	0	0	1
Kansas:												
Topeka.....	0	0	0	0	20	1	1	0	1	0	0	0
Wichita.....	0	0	0	0	0	0	3	0	0	0	0	13
SOUTH ATLANTIC												
Delaware:												
Wilmington.....	0	0	0	0	7	0	4	0	0	0	0	2
Maryland:												
Baltimore.....	0	0	1	0	119	5	4	0	25	0	0	117
Cumberland.....	0	0	0	0	0	0	0	0	0	0	0	0
Frederick.....	0	0	0	0	0	0	0	0	0	0	0	0
Dist. of Col.:												
Washington.....	0	0	0	0	74	3	8	0	10	0	1	29
Virginia:												
Lynchburg.....	0	0	0	0	9	0	0	0	1	0	0	26
Richmond.....	0	0	0	0	24	2	1	1	0	0	0	12
Roanoke.....	0	0	0	0	0	0	0	0	0	0	0	5
West Virginia:												
Charleston.....	0	0	0	0	1	0	0	0	0	0	0	0
Wheeling.....	0	0	0	0	2	0	3	0	0	0	0	24
North Carolina:												
Wilmington.....	0	0	0	0	1	0	3	0	0	0	0	11
Winston-Salem.....	0	0	3	0	0	0	2	0	0	0	0	30
South Carolina:												
Charleston.....	0	0	2	0	0	0	3	0	0	0	0	1
Georgia:												
Brunswick.....	0	0	0	0	1	0	0	0	0	0	0	0
Savannah.....	0	0	0	0	0	0	0	0	0	0	0	0
Florida:												
Tampa.....	0	0	0	0	1	0	3	0	0	0	1	0
EAST SOUTH CENTRAL												
Tennessee:												
Memphis.....	0	0	1	0	24	1	4	0	4	0	0	13
Nashville.....	1	0	0	0	1	0	1	0	0	0	0	8
Alabama:												
Birmingham.....	0	0	2	0	24	0	2	0	0	0	0	5
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock.....	0	0	0	0	0	0	0	0	0	0	0	1
Louisiana:												
New Orleans.....	1	1	2	1	4	0	8	1	2	0	1	2
Shreveport.....	0	0	0	0	0	0	1	0	0	0	0	0
Texas:												
Dallas.....	3	0	0	0	3	0	2	2	0	0	0	22
Galveston.....	0	0	0	0	0	0	1	7	0	0	0	12
San Antonio.....	0	0	0	0	1	0	5	0	2	0	0	1
MOUNTAIN												
Montana:												
Billings.....	0	0	0	0	12	0	1	0	0	0	0	0
Great Falls.....	0	0	0	0	6	0	0	0	1	0	0	6
Helena.....	0	0	0	0	1	0	0	0	0	0	0	0
Missoula.....	0	0	0	0	5	0	0	0	0	0	0	0
Idaho:												
Boise.....	0	0	0	0	0	0	0	0	0	0	0	0
Colorado:												
Denver.....	1	0	4	0	28	0	5	0	4	0	1	9
Pueblo.....	0	0	0	0	4	1	0	0	2	0	0	6

City reports for week ended June 19, 1948—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Polymyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
PACIFIC												
Washington:												
Seattle.....	0	0		0	85	0	7	0	3	0	0	8
Spokane.....	0	0		0	19	1	2	0	2	0	0	6
Takoma.....	0	0		0	1	0	0	0	0	0	0	1
California:												
Sacramento.....	0	0		0	1	2	1	0	2	0	0	5
San Francisco.....	3	0	2	0	46	3	10	1	29	0	0	27
Total.....	43	2	23	6	4,957	128	290	13	689	0	12	1,110
Corresponding week, 1942.....	65	1	32	8	3,776	26	206	7	497	3	15	1,144
Average, 1938-42.....	65		25	13	3,357		235		791	7	24	1,111

Dysentery, amebic.—Cases: New York, 2.

Dysentery, bacillary.—Cases: Portland, 1; Buffalo, 7; New York, 5; Philadelphia, 1; Washington, 1; Charleston, S. C., 1.

Dysentery, unspecified.—Cases: Little Rock, 3; San Antonio, 17; Denver, 1.

Rocky Mountain spotted fever.—Cases: Washington, 1.

Typhus fever.—Cases: Tampa, 1; Dallas, 1.

¹ 3-year average, 1940-42.

² 5-year median.

Rates (annual basis) per 100,000 population, by geographic groups, for the 81 cities in the preceding table (estimated population, 1942, 31,780,000)

	Diphtheria case rates	Encephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Polymyelitis case rates	Scarlet fever case rates	Smallpox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
NEW ENGLAND.....	9.9	0	2.5	0	1,314	52.2	74.5	2.5	400	0	0	174
MIDDLE ATLANTIC.....	4.5	.4	.4	.9	835	24.1	38.4	0	107	0	2.7	121
EAST NORTH CENTRAL.....	10.3	0	1.8	1.2	1,054	15.8	35.9	0	108	0	1.2	159
WEST NORTH CENTRAL.....	5.9	0	2.0	2.0	631	17.8	67.2	0	47	0	0	233
SOUTH ATLANTIC.....	0.0	0	11.5	0	456	19.1	59.2	1.9	69	0	3.8	491
EAST SOUTH CENTRAL.....	6.2	0	20.3	0	331	6.8	47.3	0	27	0	0	176
WEST SOUTH CENTRAL.....	15.2	3.8	7.6	3.8	30	0	64.5	37.9	15	0	3.8	144
MOUNTAIN.....	10.6	0	42.3	0	592	10.6	63.4	0	74	0	10.6	222
PACIFIC.....	11.1	0	7.4	0	563	22.2	74.1	3.7	133	0	0	174
Total.....	7.1	.3	3.8	1.0	813	21.0	47.6	2.1	113	0	2.0	182

PLAGUE INFECTION IN NEW MEXICO

Plague infection has been reported proved in a pool of 16 fleas from 9 grasshopper mice, *Onychomys leucogaster*, taken June 11 on State Highway No. 18, 12 miles south of Clayton, Union County, New Mexico.

TERRITORIES AND POSSESSIONS

Hawaii Territory

Plague (rodent).—During the week ended June 12, 1943, 1 plague-infected mouse and 1 plague-infected rat were reported in Honokaa, and 3 plague-infected rats were reported in Paauhau area, all in Hamakua District, Island of Hawaii, T. H.

Panama Canal Zone

Notifiable diseases—April 1943.—During the month of April 1943, certain notifiable diseases were reported in the Panama Canal Zone and terminal cities as follows:

	Panama		Colon		Canal Zone		Outside the Zone and terminal cities		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Chickenpox.....	17	-----	8	-----	5	-----	2	-----	32	-----
Diphtheria.....	5	1	2	-----	12	-----	7	-----	16	1
Dysentery (amebic).....	2	-----	1	-----	-----	-----	1	-----	4	-----
Dysentery (bacillary).....	-----	-----	-----	-----	1	-----	-----	-----	1	-----
Malaria ¹	11	-----	-----	-----	295	-----	92	1	398	1
Measles.....	4	-----	-----	-----	10	-----	2	-----	16	-----
Mumps.....	51	-----	1	-----	36	-----	4	-----	92	-----
Pneumonia.....	-----	10	-----	5	37	1	-----	2	³ 37	18
Scarlet fever.....	-----	-----	1	-----	1	-----	1	-----	3	-----
Tuberculosis.....	-----	27	-----	17	11	1	-----	4	¹ 11	49
Typhoid fever.....	-----	-----	-----	-----	-----	-----	1	-----	1	-----
Whooping cough.....	-----	1	-----	-----	1	-----	-----	-----	¹ 1	1

¹ Exclusive of 16 carriers.
² 143 recurrent cases.
³ Cases reported in the Canal Zone only.

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended June 5, 1943.—

During the week ended June 5, 1943, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Sas, katchewan	Alber-ta	British Colum-bia	Total
Chickenpox.....	1	31	-----	119	327	48	12	26	116	680
Diphtheria.....	1	10	4	20	3	2	-----	-----	1	43
Encephalitis, infectious.....	-----	-----	-----	-----	2	-----	-----	-----	-----	2
German measles.....	-----	5	-----	25	156	22	5	59	21	293
Influenza.....	-----	-----	2	62	6	-----	32	-----	273	375
Measles.....	1	71	-----	220	1,520	100	82	213	351	2,658
Meningitis, meningococ-cus.....	-----	-----	-----	1	7	-----	2	-----	1	12
Mumps.....	1	80	3	72	680	72	30	63	99	1,100
Scarlet fever.....	2	20	18	66	212	43	51	80	47	539
Tuberculosis.....	2	4	6	132	56	17	15	31	42	305
Typhoid and paratyphoid fever.....	-----	-----	1	7	4	-----	-----	-----	-----	12
Undulant fever.....	-----	-----	-----	1	4	-----	-----	-----	-----	5
Whooping cough.....	-----	-----	-----	61	175	32	14	23	61	366

JAMAICA

*Notifiable diseases—4 weeks ended June 5, 1943.—*During the 4 weeks ended June 5, 1943, cases of certain notifiable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chickenpox.....	9	28	Scarlet fever.....	-----	2
Diphtheria.....	8	3	Tuberculosis.....	30	46
Dysentery.....	2	4	Typhoid fever.....	8	31
Leprosy.....	1	4	Typhus fever.....	2	-----
Puerperal fever.....	-----	3	-----	-----	-----

NEW ZEALAND HOSPITAL SHIP

Smallpox.—A report dated May 14, 1943, states that an outbreak of smallpox had occurred on a hospital ship carrying New Zealand personnel from the Middle East to New Zealand; one patient who was disembarked at Colombo subsequently died. All measures of isolation, disinfection, and vaccination had been carried out.

SPAIN

Malaria.—Information dated June 24, 1943, states that tertian malaria has reached epidemic proportions in Spain, where according to official reports more than 15,000 cases with 20 deaths have recently occurred. Most of the cases are reported from the following Provinces in the order of highest incidence: Caceres, Badajoz, Cordoba, Ciudad Real, Cadiz, Avila, Toledo, Alicante, Jaen, Salamanca, and Murcia.

SWITZERLAND

Notifiable diseases—August–November 1942.—During the months of August, September, October, and November 1942, cases of certain notifiable diseases were reported in Switzerland as follows:

Disease	August	September	October	November
Cerebrospinal meningitis.....	3	7	4	8
Chickenpox.....	99	105	105	142
Diphtheria.....	120	169	180	223
Dysentery.....	8	515	424	70
German measles.....	13	10	5	5
Influenza.....	.....	.....	4	3
Lethargic encephalitis.....	.....	2	2	.....
Measles.....	119	165	65	105
Mumps.....	85	87	104	188
Paratyphoid fever.....	28	31	35	8
Pollomyelitis.....	132	166	57	33
Scarlet fever.....	192	304	226	287
Trachoma.....	.....	1	.....	.....
Tuberculosis.....	369	322	201	215
Typhoid fever.....	26	9	5	5
Undulant fever.....	11	14	4	5
Whooping cough.....	126	105	92	98

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—Except in cases of unusual prevalence, only those places are included which had not previously reported any of the above-mentioned diseases, except yellow fever, during the current year. All reports of yellow fever are published currently.

A cumulative table showing the reported prevalence of these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday in each month.

(Few reports are available from the invaded countries of Europe and other nations in war zones.)

Plague

Morocco—Casablanca.—For the period June 1–10, 1943, 2 cases of plague with 1 death were reported in Casablanca, Morocco.

Smallpox

Algeria.—For the period May 21–31, 1943, 20 cases of smallpox were reported in Algeria.

British Guiana—Georgetown.—For the week ended June 5, 1943, 1 case of smallpox was reported in Georgetown, British Guiana.

Dahomey.—For the period May 1–10, 1943, 101 cases of smallpox were reported in Dahomey.

Indochina (French).—For the months of April and May 1943, 1,114 cases of smallpox were reported in French Indochina including 343

cases in Annam, 50 cases in Cambodia, 365 cases in CochinChina, and 356 cases in Tonkin.

Mexico.—For the month of March 1943, 11 cases of smallpox with 1 death were reported in San Luis Potosi, and 12 cases with 1 death were reported in Vera Cruz, Mexico.

Portugal—Lisbon.—During the week ended June 5, 1943, 10 cases of smallpox were reported in Lisbon, Portugal.

Sudan (French).—For the period May 1–10, 1943, 143 cases of smallpox with 8 deaths were reported in French Sudan.

Turkey.—During the month of April 1943, 1,201 cases of smallpox (including 277 cases in Istanbul) were reported in Turkey.

Typhus Fever

Algeria.—For the period May 21–31, 1943, 428 cases of typhus fever were reported in Algeria.

Guatemala.—For the month of May 1943, 45 cases of typhus fever with 16 deaths were reported in Guatemala.

Mexico.—For the month of March 1943, typhus fever was reported in certain towns of Mexico as follows: Guadalajara, 6 cases; Mexico, D. F., 148 cases, 32 deaths; Oaxaca, 2 cases; Queretaro, 4 cases; Toluca, 3 cases.

Rumania.—For the period June 8–15, 1943, 176 cases of typhus fever were reported in Rumania.

Slovakia.—For the week ended June 5, 1943, 19 cases of typhus fever were reported in Slovakia.

Spain.—For the period April 18–30, 1943, 58 cases of typhus fever were reported in Spain.

Turkey.—For the month of April 1943, 747 cases of typhus fever (including 71 cases in Istanbul) were reported in Turkey.